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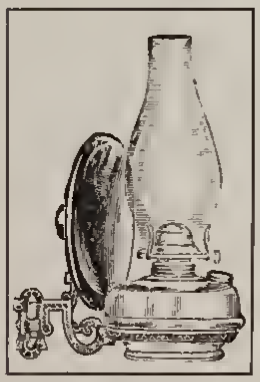

OBSOLETE, antiquated---it rightfully deserves a place in the Smithsonian Institute---this relic of *yesterday . . .* you remember it don't you? Smoky, smelly, awkward things ---they caused mother no end of worry with their charred, lopsided wicks and cracked chimneys---the time and labor she spent on them each day! Yet---they were all we had in that Mauve Decade of the past . . . they served their purpose *until a superior product was introduced.*

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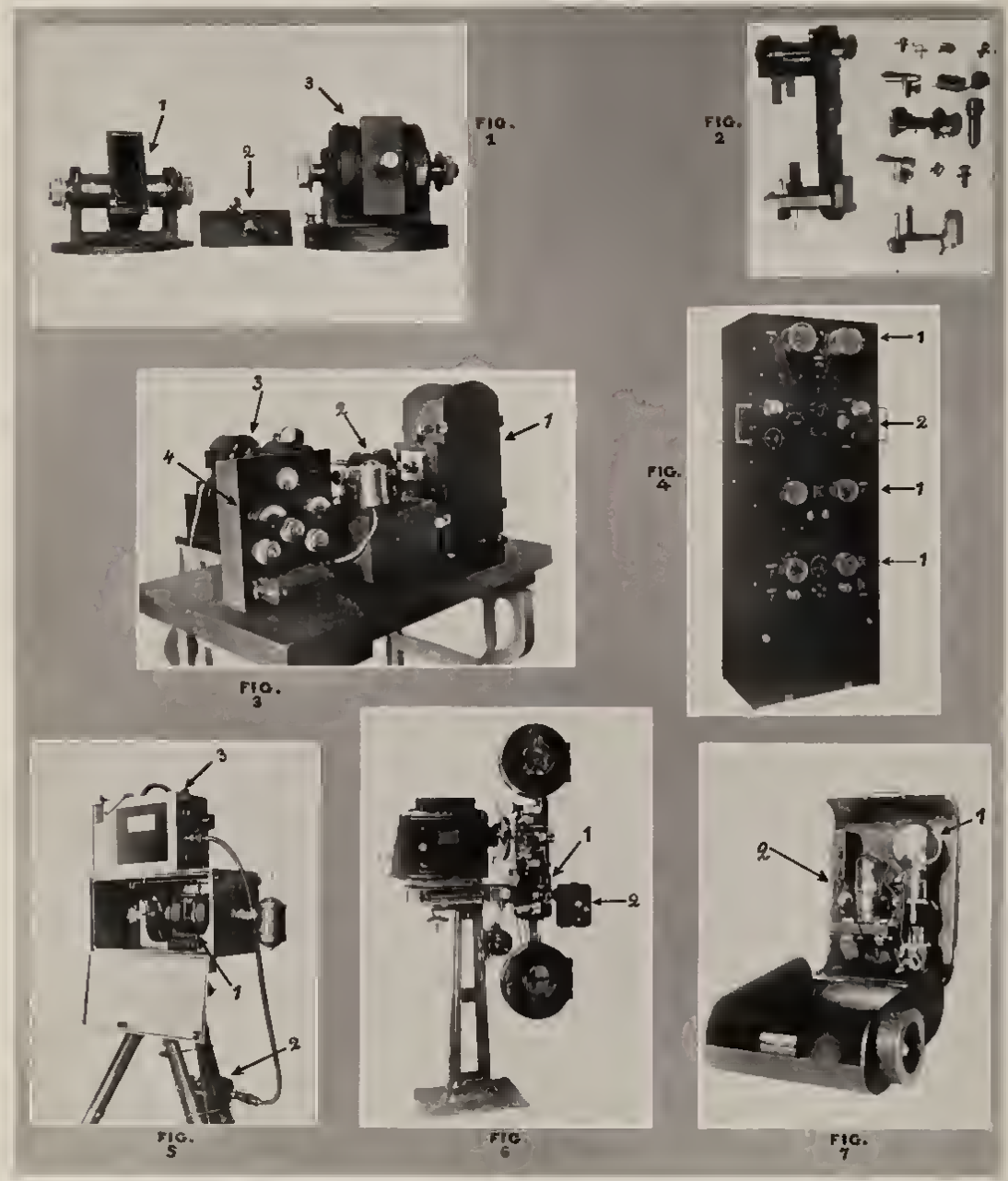


Fig 1 Oscillograph of the Shorin system for sound recording on film 1—Oscillograph with the exciting coils and cover off 2—The cover of the Oscillograph with ribbon holders fastened to it 3—The assembled Oscillograph Fig 2 The ribbon holder of Oscillograph and all parts for fastening and tuning the ribbon Fig 3 Shows complete Oscillograph Fig 4 Amplifier for sound recording having 3 sfages push-pull 1—Amplifying fubes 2—Control panel Fig 5 Expeditionary type sound and picfure recorder 1—Oscillograph 2—Synchronous motor 3—French type camera of system ' Debrie " Fig 6 Stafionary sound projector 1—Mechanism of uniform motion 2—Box of photo cells Fig 7 Box of photo cells 1—Photo cells 2—Head amplifier

Sound Picture Equipment in U. S. S. R.

by **M. J. MOSHONKIN**
Chief Engineer Central Laboratories of Wire Communication, U S S R

THE DEVELOPMENT of Sound Picture Apparatus in the U S S R is a matter which has its own history

A little more than four years ago Prof. Shorin developed and applied a one ribbon oscillograph for recording sound on films

Two years of laborious work of the central laboratories of wire communication under the direction of Prof Shorin resulted in the first models of this apparatus for recording and reproducing of sound.

Besides the work of Mr. Shorin, the Experimental Electrical Institute under the supervision of Mr. S Tager has been experimenting in the application of the "Kerr Cells" for the same recording purposes

The apparatus developed by Mr Shorin left, more than two years ago, the stage of laboratorial experimenting and went over on the basis of production.

Photo No 1 represents one of the latest models of a one ribbon oscillograph Figure No 1 shows the oscillograph with the coils for exciting the magnet field taken off and the cover which prevents the dust from penetrating into the oscillograph

Figure No 2 shows the cover with the ribbon holders mounted on it.

Figure No 3 shows the complete oscillograph

The ribbon for the oscillograph 0.007 x 0.15 mm is made of a material which has a great tensil strength and is tuned for a frequency of 7000 cycles per second

Photo No 2 shows the construction of the holder with the tuned ribbon and all composing details The ribbon vibrates within the space formed by the two magnetic poles of the oscillograph

Between the magnetic poles, on a small distance from the ribbon, the two objectives are located The magnetic poles have small holes which go through the optical axis of the objectives and one of them gives a reduced image of the light slip which is located in the plane of the vibrating ribbon The images of the light slip and of the ribbon are produced on the film by the second objective

On Photo No 1, it can be noted that the moveable part of the oscillograph can be moved along its optical axis, and consequently the ribbon can be placed either parallel to the light slip or perpendicular In the first instance, the vibrations of the ribbon will record the sound in variable density In the second instance in variable area

The images given by the optical system in both cases meet the requirements presented by the modern technique of sound recording and the source of light of this system is greater than is required for work with a positive film.

The advantage of this optical system consists of the fact that it permits a direct visual supervision of the size of amplitude on the sound track It enables the cameraman to follow the progress of recording and in cases when it is "overdone" he can repeat it without having the film looked over or listening to it

Such a construction of the oscillograph results in the capability of getting two kinds of sound recording It eliminates the much discussed and complicated question of whether recording with variable area is superior to the variable density as far as practical results are concerned.

The whole oscillograph is well designed, rigidly constructed and convenient for handling

At the present time three types of sound recording apparatus of the Shorin system are being produced in the Soviet Union.

1—Stationary type,

2—Portable type,

3—Expeditionary type

Photo No 3 represents a stationary installation of a sound recorder The oscillograph in this installation has three movements longitudinal, along the optical axis of the objectives for focusing the image on the film, also horizontal and in height for placing the image on the proper place on the film

In the set of the stationary installation the following are included: condenser microphone, the new developed amplifier (photo No 4) with the uniform characteristic of 40 to 8000 cycles per second

The second type of sound recording apparatus is mounted on a table which can be rolled over from one studio to another or can be suspended from the ceiling of a sound truck. In this type of an installation the amplifier is of much smaller dimensions and is placed inside the moveable table

The third type, the expeditionary type has the apparatus mounted on a tripod with a French camera mounted on the top This type does not work with two films but with one only, which makes it very convenient for newsreel work. The camera is driven by a small low voltage motor direct current which is placed on the tripod The amplifier for this type of installation is made of tubes with a small anode voltage The whole installation is portable and gives very satisfactory results (Two types of kinoprojector apparatuses for sound projectors)

For sound projection in the U S S R two types of native made apparatus are generally used These sound projectors have been developed by the Optic-Mechanical Trust To these types of apparatuses the necessary sound attachments have been applied Photo No 6 gives a general view of the stationary type of the sound projector

Photo No 7 shows the construction of the box containing the photo-cells and the initial amplifier The photo-cell shown on this photograph is one of the types of potassium photo-cells that have been developed by our laboratories.

For the initial amplification as can be noted on the photograph, one stage of amplification is sufficient.

The catode-tube is of Russian production and consumes very little current The photo-cell box is of compact construction and convenient to handle

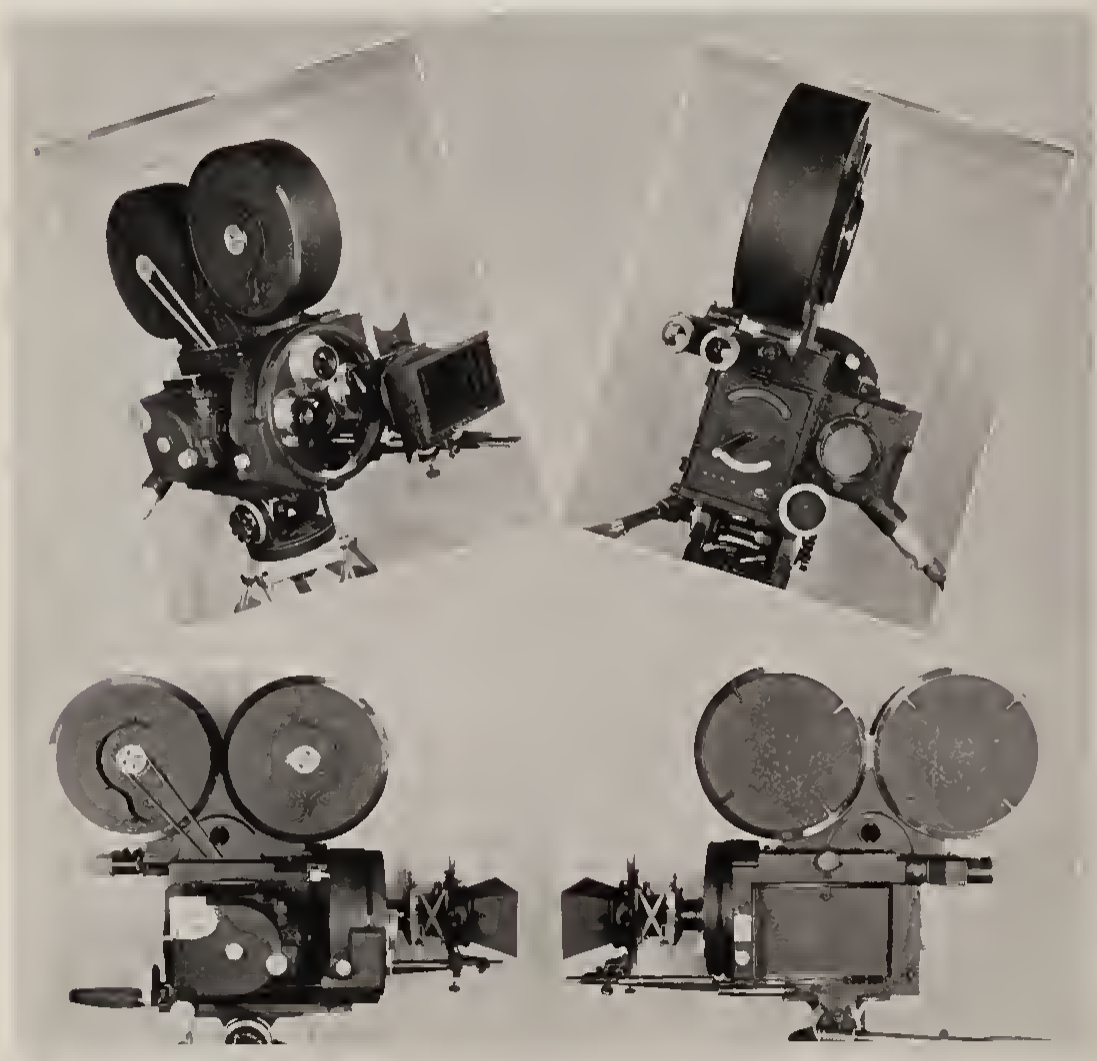
For such a type of sound projector which gives a large screen, the laboratory has developed a moveable kino-theatre mounted on an automobile truck

The portable sound projector developed on the Russian model "G03" is of compact and simple construction

If the demand for big theatres for the cities in the U S S R is great then the demand for small installations on the collective farms, towns and villages can be expressed as tremendous

The "Gosplan" (State Planning Com.) has put the number of Sound Picture installations at the end of the "Piatiletka" (5-year plan) to be 40,000, the cost of which will exceed 100 millions of Roubles More than ¾ of this amount will be spent on electrical equipment which puts a still greater responsibility on the Soviet Electrical Industry At the beginning, the orders for this equipment will be placed with the

(Continued on Page 32)



Above, left Three-quarter view of the new camera Note the compact in-built synchronous motor and the fixed lens-mounts The lenses are pre-focused in their mounts upon a point slightly beyond infinity and further focusing is effected by moving the entire turret

Above, right Rear view of the Warner Bros Camera showing grouping of controls at rear Note the binocular focusing eyepiece the lock on the shutter adjusting lever, and the large focusing knob at the lower right-hand corner of the camera

Below, left Right-hand side of Warner Bros New Camera The upper left hand knob on the motor is the cover of the 1 1 crank shaft the center one the cover of the B I shaft and the lower one for manually operating the movement when threading up Above this is the motor-releasing clutch Directly to the rear of the turret the knob operating the partial reflecting prism for following focus may be seen Notice also the protection afforded the magazine pulleys and driving belt

Below, right The left side of the camera showing the magnifying focusing-tube system and below and behind the turret the knob controlling the total-reflecting focusing prism

Warner Brothers' New Camera

Given First Public Showing at A. S. C. Meeting

by **WM. STULL, A. S. C.**

THE OCTOBER meeting of the American Society of Cinematographers marked the premiere showing of what is, in the unanimous opinion of the several score cinematographers present, undoubtedly the finest and most advanced motion picture camera thus far developed. This is the new Warner Brothers' Camera. It is singularly fitting that from this organization, whose introduction of the Vitaphone first drove the cameraman into the seclusion of sound-proof camera-booths, should come a design which will completely free him from the restrictions brought about by the necessity for insulating all camera noise from the microphone. For the new camera is absolutely silent in its operation. This, alone, is enough to commend it heartily to all cinematographers engaged in sound picture work, yet aside from this there are embodied in the design innumerable other refinements of greater or less importance, which combine to make it, in the words of the cinematographers who inspected it, "A real cameraman's camera."

This perfection of detail is probably best understood when it is known that the men responsible for the new camera are Albert Tondreau, Frank Murphy, and Fred Gage, A. S. C. For, in addition to the technical skill naturally indicated by their positions as heads, respectively, of the Camera Machine Shop, Electrical Engineering, and Laboratory departments of the Warner Bros.-First National organization, these three men possess an uniquely intimate knowledge of the technical needs and troubles of studio cinematographers. Therefore, when J. L. Warner gave this triumvirate **carte blanche** to proceed with the development of a camera that would be perfectly suited to the needs of studio cinematography, his selection automatically guaranteed the success of the project.

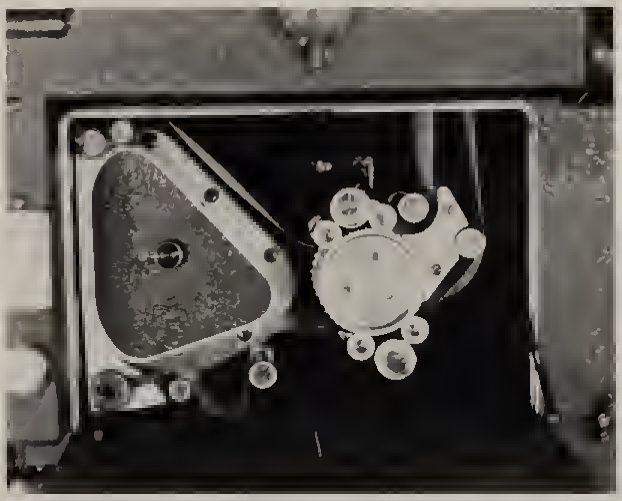
The camera which has resulted from these efforts is a revelation in design and workmanship. The general arrangement of the component units follows conventional practice, but the detail refinements combine to make the new camera an unique creation, and evidence a most unusual understanding of the needs of practical studio cinemachinery on the part of the designers.

As has been stated before, this new camera is absolutely silent in its operation. This silence is secured chiefly through the use of insulated, double-wall construction throughout the camera case. The design of the movement employs the conventional means of silencing gear and other noises, and in addition embodies several unique features, concerning which, however, pending the granting of patents, little may be said. The actual film movement is secured by means of the conventional pair of actuating fingers and pilot pins. The movement is entirely enclosed, not only to reduce sound, but to protect the film from any oil that might be thrown from the moving parts. There is an unusual roller pressure-plate, operating under variable tension, which is controlled through eccentric cams and a spring. This pressure-plate is easily removable for cleaning, and its roller construction is claimed to assure freedom from scratches caused by the presence of dust and such foreign material.

The shutter has the unusual opening of 180 degrees. It is controlled from the rear of the camera, in the conventional manner, with an indicating dial and operating lever. This lever, however, is provided with a positive lock, whereby the shutter can be locked at any setting, with the assurance that it cannot be changed accidentally. In addition, it is expected that the later models of this camera will have a dissolving shutter, as the preliminary designs for such a part indicate that it is possible to make one which will operate silently.

The oiling system has received special attention, particularly from the point of view of maintenance. All of the oil lines have been brought to a central point, on the right-hand side of the camera, where, by removing a small plate, the oil leads to every bearing in the camera and motor may be oiled at once, obviating the possibility of accidentally (or otherwise) neglecting to oil any point in the camera.

The standard Western Electric three-phase, synchronous motor is an integral part of the camera. Special care has been given to the cooling of this motor, and this difficulty, which has previously given so much trouble, has been entirely overcome. In addition to the synchronous motor, provision has been made for hand-cranking and for the use of a standard Mitchell motor for use when shooting silent scenes and inserts. Both the standard 8 1 and 1 1 crank shafts are provided, while a special clutch engages or disengages the synchronous motor at will. With the motor disengaged, the camera turns surprisingly freely, despite the fact that it in common with all other sound cameras, has no ball bearings.



Film compartment of W. B. Camera showing enclosed intermittent movement

Aside from its silent

(Continued on Page 30)

Carrying a Camera to "World's End"

by **DON F. TAYLOR**

[Captain A Carpelan formerly an officer in the Personal Bodyguard of the Czar of Russia, and a well known scientist and world traveler, and Don F Taylor who has spent fourteen years in the Tropics on exploration trips are heading one of the most ambitious scientific expeditions that has left American shores in some time It is to be a tour, mostly in the tropical belt in which the making of motion picture records of the extremely unusual type will be the feature and will probably leave in March The expedition will be headed by Captain Carpelan with Taylor as his assistant The very latest in camera and sound equipment will be taken and the expedition will probably occupy two years or time Mr Taylor has written the extremely interesting article which follows and which will explain the object scope and details of the expedition which should result in some unusual cinematographic records —The Editor]

THE purpose of this expedition is a combination of scientific and motion picture work The main reason for going at this time is the likelihood of the disappearance of the fauna in the South Pacific Islands

Many so-called explorers are depleting the islands, travelling here and there—killing just for 'sport' Some natives depend on the wild animals for food These facts were observed by William Beebe on his last expedition to the Galapagos Archipelago in 1923, and his report states that it will not be long before all the animal kingdom will be exterminated

The expedition expects to leave New York in April, 1931, for a period of two years, during which time a distance of 28,000 nautical miles will be covered A voyage of this nature summons up visions of beauteous tropic islands, bright regions of romance beyond the horizon of a commonplace world, far places inhabited by we know not what

Before going further into the subject, we will give the reader the names of all the places where we expect to stop

Sailing from New York, our first port will be Haiti, then on through the Panama Canal to the Galapagos Archipelago, the Marquesas, the Tuamotu Archipelago, Tahaiti in the Society group, Tonga Island, Norfolk Island, and thence to Sydney, Australia, for supplies

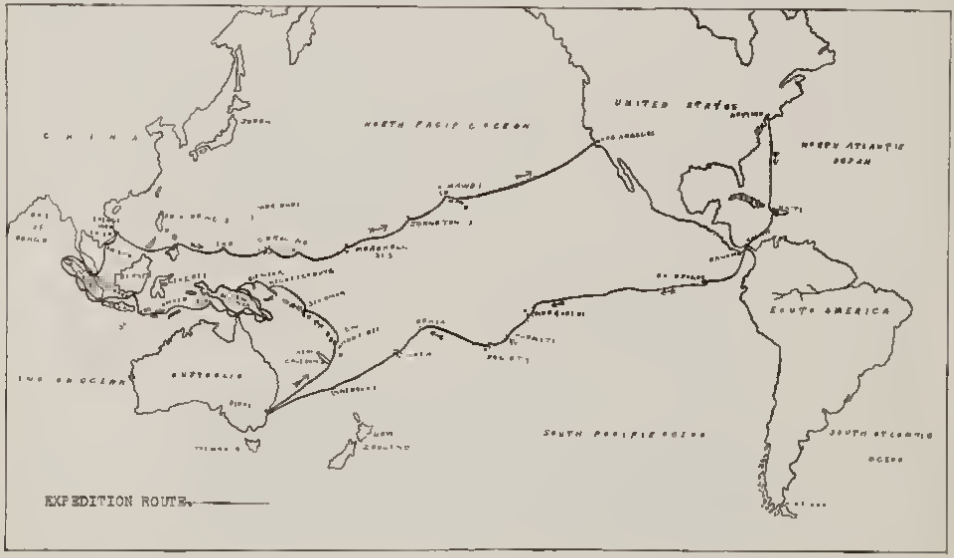
After leaving Sydney, the expedition continues to the New Hebrides, then to the Solomon group, the New Mecklenburg group, the Admiralty Islands, the Bismarck Archipelago, then to Kaiser Wilhelm's Land, otherwise known as German New Guinea, now mandate to Australia The expedition plans to remain here for a period of four months, and the work will cover British and Dutch New Guinea as well

From New Guinea the next stopping place of the expedition will be the Komodor Island in the Dutch East Indies, thence to Bali, from Bali to Dutch Borneo, then through the Sunda Strait up the west coast of Sumatra, making three stops on the way to Kotaraja for water and supplies, then south through the Straits of Malacca to Singapore, where the expedition plans to develop the film of the trip thus far From Singapore we proceed to Saigon, French Indo-China

On the return trip from Indo-China the expedition will make a short stay at the Philippine Islands, going from there to the Marianne Islands, the Caroline Islands the Marshall Islands and Hawaii, our last stopping place before sailing for Los Angeles

The following is our outline of work to be accomplished at all these stopping places—

Beginning at Haiti, the expedition will stop at La Petite Gonaives in the Gulf of Gonaives, where the horned lizard is found It is at St Marc, some 200 kilometers north of Port au Prince, where the Mabouya, a large, sharp snouted reptile, is found They are among the most conspicuous lizards in Haiti This lizard has bright yellow stripes along the body, and they are frequently found living in colonies near the river



Proposed route of the Expedition

Varanus Komodoensis He too will have to face the camera

A few specimens of this lizard will be collected for the museums, and motion pictures will be made of this interesting reptile

The next stop, at Panama City, will be for fuel and provisions From Panama the expedition will steer a straight course to the Galapagos Archipelago (World's End) It is a tiny group of about 60 islands and islets, and is situated directly on the equator, 500 miles off the coast of Equador Previous expeditions which have spent a year or more here have failed to penetrate to the central craters These islands are famous as the group that Darwin studied for his Origin of Species, and is called "World s End ' by scientists because it abounds in wonderful creatures, the best known among them being the Land Iguanas It is also the home of the only living marine iguana lizard and giant tortoise

Rhinoceros Iguana another type of [illegible] be sought

Here the members of the expedition will have an opportunity of studying the magnificent animal life and oceanography Here also motion pictures will be made, with sound effects, showing a land famous as the burial place of pirates

From here the expedition will make for the Marquesas, a group of lovely islands in the mid-south Pacific seldom visited by steamers Here we will come in contact with the primitive but hypnotic charm of the idyllic life on the islands, where complete motion picture records, in color and sound, will be made, showing the natives in their primitive homes

In the Tuamotu group the expedition will stop long enough to obtain pictures of the islands and its inhabitants A study will also be made of the fish found in these waters and specimens of the rarest will be collected

In Tahaiti, and the other islands forming the Society group the scientific body of the expedition will study the inhabitants of these islands, who are rapidly disappearing. The people of these islands have long been known to be loyal, generous, friendly and imaginative They have a keen appreciation of individual integrity, expressed in personal independence, with clear conceptions of justice and honor, high refinements, subtleties and graces in social and aesthetic expression, and capacity for rational and imaginative thought belonging to a very high order of intelligence Dr Hanby stresses the democracy and truthfulness of these islanders Now there is a mere handful of them, for with the coming of the white man a Pandora's box of predatory and destructive influences was opened, and these lovely people were wiped out before they had received much encouragement to alter their ways

At Samoa the members of the expedition will visit and study some of the outer islands of this interesting group There they will see the fair skinned Polynesians, who are the tallest and handsomest and the most magnificent, physically, of all the human family The men are nearly all over six feet in height, and rival, in physical characteristics, the creations of the ancient Greek sculptors This can also be applied to the women, who keep their bodies extremely clean, bathing sometimes from two to four times a day

Here starts the most romantic part of the cruise, for one will be refreshed by the restorative effects of an ocean voyage, for the South Sea lanes are roads to health, and the world will be more than a colored map Robert Louis Stevenson, Jack London and many others were lured by that spell of beauty in landscape and seascape to make these islands their home, for they wished to get away from our busy civilization

Here the motion picture department of the expedition will produce and film a feature picture with color sequences and sound effects of an ancient Polynesian folklore, the actors being the natives of the islands

In the Tonga group we shall obtain a collection of plants, birds and fishes Here also film will be made, after which the expedition will proceed to Sydney, Australia, stopping at Norfolk Island for water

At Sydney, the expedition will endeavor to obtain the cooperation of the Australian government in the next lap of the trip, which will be the most dangerous undertaking thus far Here we shall pick up a fresh stock of film, food supplies, trade goods for the natives and authentic information covering the locale immediately before us This is the first place from which we will ship back to the United States motion picture film and museum trophies

(Continued on Page 24)

Marine Iguanas (Conolophus Subcristatus) to be photographed in native habitat

Screen Definition

by **DR. L. M. DIETERICH**
Consulting Engineer

Part II

IN ANALYZING the influence of diffusion discs upon the pictorial quality of a motion picture negative, we must realize that any definition defects of the negative are automatically magnified through the magnification of the picture for screen presentation.

If such defects or rather imperfections are observed on the screen and if they should be caused by the use of diffusion discs when taking the picture, their source is usually not recognized and, furthermore, very difficult to trace back to individual disc characteristics and their correlation to the lens for the specific picture

Figs 1, 2 and 3 show that the influence of disc diffusion is detrimental to the photographic value of a picture taken through such disc These pictures have, of course, been taken under the most unfavorable conditions simply in order to show plainly and to make easily recognizable what the destructive influence of such a disc actually is.

Close analytical scrutiny shows that there are marked differences between the detail characteristics of the test chart image within and outside of the disc areas

These pictures were taken with a 100 mm Raytar lens, object distance 3 feet, distance of disc from chart, 5 inches The disc for Fig 1 was a standard 3-inch Eastman motion picture diffusion disc, No 3, for Fig 2, an Eastman diffusion disc OA Fig 3 was taken without disc

The discs used in this test consist of optical plano glasses, the whole assembly having a high light transmission value A net grid of small triangles is ground in the glass surface for No 3 The straight intersecting lines forming such triangles are of cylindrical characteristics and perform in their optical reactions as imperfect plano-concave or cylindrical negative lenses

Disc OA has circular ground grooves Some diffusion discs consist of gelatin layers with impressed grids and held between two glass plates

From two to as high as approximately 15 per cent of the light rays coming from an object point pass through these uncorrected pseudo semi-cylindrical lenses with the result that spherical and chromatic aberrations, astigmatism and coma of varying and irregular values are introduced for an appreciable percentage of the image-forming rays

The black and white test chart picture, of course, does not show any color value influence but general distortion can even in these only slightly magnified cuts be easily seen in the shape and even in the continuity change of the straight, sharp lines forming the test chart

Outside of these aberration and distortion effects the bending of the rays not only diminishes the concentration of the full actinic value for one point but spreads uncontrollable actinic reaction upon different parts of the light sensitive surface, thereby reducing contrast values and to a lesser degree, definition also This slight "softening" of definition, although spread over the whole depth of focus eliminates primarily the wire sharp effect at the critical plane of sharpness, and it is for this reason that a careful use of diffusion effects produces a certain roundness or depth effect which is so desirable This part of diffusion disc reaction approximately produces therefor the desired effect of "softening" the picture, but only in more or less segregated areas, with more or less overlapping effects, and, under visual inspection of the small ground glass image of apparently even distribution, when the best position of the

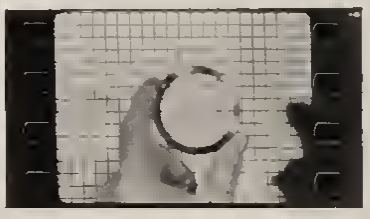


Fig 2

disc to the lens is located This best position for a given disc and a given lens combination is, however, usually found only by the trial and error method

We have here an interesting example of compromise, so often forced upon the attempted solution of a technical problem

The use of diffusion disc OA with circular cylindrical grooves, under the expert handling of Ned Van Buren, in close contact with the same lens resulted in its best possible performance in the pictures shown in Figs 4, 5 and 6 They were taken under exactly the same conditions that constitute a scientific comparison The characteristic differences between these pictures are more apparent under screen magnification than in the restricted size shown herein

Fig 4 shows sharp focus without disc
Fig 5 shows sharp focus with disc
Fig 6 shows slight out of focus

Fig 6, as compared with Fig 3, clearly shows the "fuzzy" out of focus effect or destruction of lens definition without, however changing contrast values

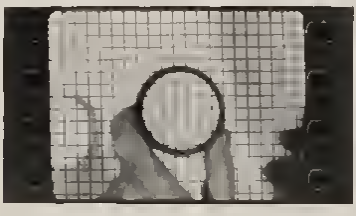


Fig 1

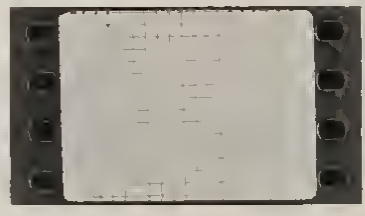


Fig 3

Fig 4

Fig 5 shows a hardly perceptible change in lens definition, but markedly less contrast, the light background being darker than seen in Fig 4 and Fig 6, and the black lines and surfaces less dark than those shown in Figs 4 and 6

The characteristics of Figs 1 to 6 prove to a marked degree the analytical observations as above expressed

It seems however, that not only better optical fundamentals could be found for producing diffusion, if diffusion is the only means of approximating the correct softness of a photograph, and that, furthermore improvements in the execution of the prevalent diffusion disc designs would be desirable

If this short analysis should draw the attention of the cameramen to the optical shortcomings of diffusion disc performance, there is no doubt that their concerted demands would spur the optical designers and manufacturers to renewed efforts as has been done under similar circumstances before

Without disparaging the value of the theoretical knowledge of the optical engineer who produced the fundamentals upon which the whole art of photography was built, it is nevertheless just as true that most of the important refinements in optical perfection followed the demands of the practical photographer who pointed out the road which the designer must endeavor to follow

Let us assume for the present that the experienced cameraman is thoroughly familiar with the results which his equipment can produce, that his equipment is up-to-date and complete, and that he thoroughly masters the art of lighting Under these conditions he is reasonably sure of satisfactory "screen" definition

Fig 5

In some cases of details of production, however, conditions are forced upon him which all his skill and all the excellence of his equipment cannot bring to a normal screen rendition

Where, for example, director or supervisor insist on certain groupings of persons or objects for a desired dramatic effect, enhanced by rapid change of object distances a s f all the "tricks" of the profession, be it travelling shots, stationary change of focus, rapid aperture control or even the difficult light changes or dimming during action—all these expedients make the final screen definition, under such enforced handicaps, of more than problematical good value

Such poor screen definition is, however, not chargeable to improper use of the available technical means by the cameraman, but rather to the lack of knowledge of their existing limitations and shortcomings by others

Before closing this analytical article the following train of thought is submitted for at least speculative consideration

Fig 6

The delicate lens surfaces receive the most meticulous care and protection because the cameraman knows, often through sad experience, what a surface blemish means as far as photographic excellence or even only good photography is concerned An accidental scratch on the front surface—and the lens is speedily discarded

Diffusion discs are in good practice placed in touch with the front surface of the lens

The optical action and efficiency of the front surface is thereby so changed as to parallel a great number of blemishes or scratches placed upon it, we might say, with malice aforethought

Think that over

There are, however, a number of other technical factors influencing screen definition and we shall, in the next article, endeavor to analyze filter effects

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(This is the second of a series of articles on "Screen Definition" which Dr Dieterich has prepared for The American Cinematographer The first appeared in the November issue Another will appear in the January number If you missed the first article copies of the November issue may be procured by writing the business office of the magazine —Ed Note)

Shooting the News

A Noted Newsreel Cameraman Writes About His Experiences in Photographing News Events That Have Made History

by **RAY FERNSTROM**

FEW PEOPLE realize the amount of time, work and money expended in securing the few minutes entertainment on the screen known as the newsreel. The newsreel is sort of taken for granted, as it were, by the theatre audiences—just a few interesting shots to fill space before the feature picture.

In a newsreel of one thousand feet, not more than nine or ten subjects (or stories, as we call them) are shown. However, often as many as twenty or thirty assignments have been "covered" or photographed—the limited footage crowding out all but nine or ten. Perhaps cameramen have gone through untold suffering and hardship to get those not used, but the audience doesn't know—has no way of knowing about it—about the heartaches of the men who have shot those subjects not used.

There are many reasons why "stories" are not used even after they are shot, sometimes at great expense. The chief one is that they may arrive too late to be "hot news," or, perhaps, some technical accident has ruined the shot. One newsreel man, for example, covering the dynamiting of a huge brick smoke stack in a heavy rain, had protected his lens with a handkerchief. When the charge finally went off and the smoke stack crashed to the ground the newsreel man ground away only to discover later that his handkerchief had been sticking out of his lens hood. No picture. Luckily, another man from his office was also covering, so he got it.

Then, take the case of Dick Sears, one of the most famous news reel men of New England. Dick went down to a little ship yard on the Essex River in Massachusetts to get a picture of the launching of a fishing schooner that was to compete with a Canadian schooner for the championship of the Atlantic fishing boats. Dick wanted to get a good shot, so he secured a row boat and on it placed a couple of boxes. On top of that he climbed with his camera and was set to get a wonderful shot of the schooner coming down to the water. He forgot that the river was small and when the boat hit the water the river rose. So did Dick. The last we saw of him he and his camera were heading for the bottom of the river. That assignment was over for Dick.

The writer once had what one might call a tough break. It was some four years ago. I was to cover a story at Mt. Rainier, Washington. With a party of climbers we set out to climb to the summit and make a newsreel picture of our efforts. This was a really tough assignment, from the physical point of view. The old mountain is 14,408 feet high. If you think it is an easy task to carry a camera and film up and down that peak, go out and try it. We shot scenes every two thousand feet of the ascent. At eleven o'clock that night we reached the half-way mark and stopped for a few hours rest. At daybreak we had reached the ten-thousand-foot mark and photographed a magnificent sunrise. At last, we reached the summit. It was zero and a sixty-mile wind was blowing. Here we finished the picture and started back down. It was more difficult than the ascent. Finally, we staggered into the hotel at the foot of the mountain. With great pride the "story" was shipped to our lab. A week later I was notified that it had been "thrown out" because a shaky tripod had spoiled it all.

Generally speaking, however, one does have the satisfaction of seeing most of his work on the screen—and it is a satisfaction, especially if you have suffered in getting the subject.

Henry De Siena and I were assigned to cover one of the famous Madison Square Garden six-day bicycle races. Our boss wanted something different than anyone else had ever shot. Henry was sure we could get an Akeley shot following the riders continuously around the track. "Now," he said, 'See those girders up there near the roof?"

"Yeah!" I answered.

"Well, if you go up to the top balcony, go out by the fire escape and in another window, then up that other fire ladder and I am sure you can crawl out onto the girders behind the ventillating fans. There you will come to a small door. Open it and you will come to a small platform. See it way up there? Well, get up onto it and shoot with the Akeley."

So saying, he added that we might need a flashlight, and gave us one. Good thing he did, for when my assistant and I had finally reached the top of the last fire ladder we found ourselves in pitch darkness with nothing but girders on which to walk. We decided to keep going. A few steps in the darkness and our heads banged against another girder. My assistant slipped and stuck his foot out. It hit a piece of beaver board and went through. Why he didn't fall I don't know.

A group [illegible] at Lindbergh Field, Ottawa, Canada.

But—through that hole in the beaver board we could see the track down below us We crawled the remainder of the way to the platform and fortunately got a good shot of the races Few in a theatre audience ever even thought about what the newsreel men might have had to do to get that shot when they saw it flash by

Often a newsreel man will get what might be a world-beater of a "story," but loses out because it reaches the laboratory too late to be news For example, Russ Muther and I were in Lapland covering a special reindeer story We were just two hundred miles north of the Arctic Circle The thermometer registered 58 below zero when we dropped off the train at the nearest point to where we were to work Was it cold! We piled into a sleigh and set out for the spot where the natives were pulling off what might be called a reindeer roundup They were separating the animals ready for driving south in search of moss for food There were about ten thousand animals in the roundup, and our bosses figured it would make a spectacular story We finally reached our destination, set up the cameras And then came the reindeer—looked like millions coming straight at us We ground for dear life, wondering what would happen when the animals reached us It was too good a picture to lose, so we stuck As a matter of fact, we had no place to go, anyway And then as the head of the drove reached us the drove split There we were in the center while reindeer dashed by at express-train speed It finally ended, and we had a magnificent story He shipped his to his company I shipped mine But mine got lost en route—and it never did reach the screen The luck of the newsreel game!

It sometimes takes weeks to get a picture that will last but five minutes on the screen One such was the lucky assignment I had given me when those daring German fliers, with an Irish companion, made the first airplane flight westward across the Atlantic and landed in the frozen wilds of an island off the Labrador coast We flew in a plane through fog and snow that threatened to bring us to ruin every minute After many forced landings we finally reached them and brought back a 'scoop" for our company But it lasted only six minutes on the screen Few newsreel cameramen are ever lost, but often have close calls Back in 1925 Lieutenant Holm of

Mr Fernstrom center ready for a climb up Mt Rainier

Mr Fernstrom photographing the daring German fliers who made first East-West Atlantic flight

the Norwegian Navy and I were flying along the northern tip of Spitzbergen looking for signs of Amundsen and Ellsworth who had set out for the North Pole in a couple of Dornier Wahls, and whose continued silence had the world worrying As we were flying along the ice barrier I felt a pressure on my foot I looked down and discovered that one leg of the camera tripod had pushed through the fuselage In a moment the camera came slapping back and jammed me fast I was fast and the leg of the tripod was sticking out for a half hour while I struggled to get matters fixed At last we pulled the tripod leg back and—later we got the story we were after and all was well

Another time, I was over at Coney Island as it was opening for the Summer business I wanted to get a good shot of the place, so climbed into one of the cars of the big Ferris Wheel Up went the car When it reached the top of the circle the machinery went bad and there was I at the top of the wheel, with no way to get down and the mechanics unable to start the darned thing It was only 150 feet from the ground I climbed down after an hour of waiting Got a rope and climbed back up and lowered the camera to the ground Good thing I did, for the wheel was stuck for two days

Those things are all in the day's work with the newsreel men, who are like newspaper reporters in that you can hardly pry them loose from their game

Newsreel cameramen are just as proud of their work as are the cameramen in any studio Sometimes this is overlooked in the minds of some people who think they just set up a camera and "shoot " They do more than that They shoot in a hurry, but they try to secure the most artistic pictures possible under, many times, the most trying conditions imaginable Often they are hurried because the event they are after will be history within a few seconds But the feat of Rucker and Van Der Veer, the two newsreel men who went to the South Pole with Commander Byrd, in making the picture which was given the Academy of Motion Picture Arts and Sciences' award for the most outstanding cinematographic achievement of the year, proves what a newsreel man can do "With Byrd at the South Pole" is a master-piece of camera work, and the newsreel men are happy that the industry recognized it as such and gave it just reward

Hal Hall SAYS

Drivel!

MAYBE it's a bit undiplomatic—perhaps a bit unkind—however it is in the system and must come out—just like the measles

Why do the newspapers print so much inconsequential drivel regarding pictures and picture people? Why don't the newspaper editors check up on the technical and semi-technical stuff they print regarding pictures? Take for example one of New York's most outstanding picture critics the other day pulled a master-piece He was reviewing a picture and stated among other things that the sound was better than in any picture he had seen He explained in his dignified way that it was no doubt due to the fact that the picture was on wide film and that the film track was wider and gave better results As it happened—this picture was recorded on disc! Well!

And then the drivel who cares about the fact that Jane Doe wants her sugar scattered over her breakfast food with a spoon that was used by her grandmother? Who cares if John Doe wears blue or purple pajamas on Thursday nights—or if he wears any at all Maybe it is the fault of the studio or theatre publicity men If so even though they may get terribly peeved at this writer, may I suggest that they give us something a little more worthwhile Let them take a leaf from the book of RKO publicity department which supervised the campaign on Check and Double Check " I bet nobody has ever read about the color of Amos' or Andy's pajamas

Uncle Carl!

WHAT a thrill dear, old Uncle Carl Laemmle, of Universal, must have had on the evening of November fifth! Imagine, standing up before the brains and cream of the motion picture industry and receiving a bronze statue which carried with it the opinion of the industry that he had produced the greatest motion picture of the year!

Will Hays, Czar of the industry, and all of the highbrow nabobs of the picture business sitting at hand All listening to Conrad Nagel telling this wizened old gentleman that he had made the greatest picture of the year! There was drama there for those who have any imagination For this same old man had landed on our shores with scarcely one nickel to rub against another not so many years ago Strange to the country, customs and people And then he had entered the picture business and for years had struggled on as an "independent" making "horse operas," as they call the westerns, and other pictures at costs so cheap that the "big fellows" laughed at the idea of Carl's organization ever making "big pictures" But Uncle Carl paid his bills and met his payrolls He made pictures that pleased his public and he knew what he was doing When the picture business was slowly sinking in the mire of despair which has had them all scared for some time, he and his son, together with Lewis Milestone, the director, gave the world a picture that will be talked about for years —a masterpiece And the industry, represented by the Academy of Motion Picture Arts and Sciences, gave Uncle Carl the chance to stand up and take his bow—not as a maker of "horse operas"—but as the head of a studio that produced the finest picture of the year, "All Quiet On The Western Front" What a thrill that must have been for Uncle Carl! Our hat is off to him—and may he and his son go on forever making master-pieces!

Pee Wee Golf!

AT LAST, the miniature golf scare is over From my window I can look down upon two gorgeously beautiful courses of the pee wee variety and at this moment nothing is stirring but the palm trees that dot them And therein lies a tremendous lesson for the picture makers

Overnight the miniature golf course sprang up and the crowds stayed away from the theatres and flocked to them to knock a little ball through a glorified tin can And then came the blowup People tired of knocking the same ball through the same can

And so with pictures Producers are like sheep They run in flocks Someone makes a good crook picture It makes money The same producer makes another crook picture immediately, and all the other producers start making crook pictures The first thing they know they are wondering why the theatres are empty Simple! The people want a little variety They tire of the same tin can!

Dough, Ray, Me!

BARBER SHOP chords are not so prevalent in Hollywood circles these days since the musical boys of Broadway have been receiving the final pay checks from the various studios For a while Tin Pan Alley moved right into Hollywood and boys who used to wear spats and carry canes down Broadway and make wise cracks regarding Hollywood were living here in $100 a-month apartments that had been boosted to $300 per month just to make them feel that they were being swanky

Now you pick up Variety and look at the column which tells you who is Broadway bound and you see many, many musical names headed back to the spot where they turn out the 'Sweet Adelines,' etc M-G-M is the latest to give the go-bye to the musical writers They have just handed the bad news to nine composers, three conductors and an even half dozen arrangers The Broadwayites are beginning to find out that what we say about Hollywood is true—it is a tough place in which to get along

What the Hell!

THIS picture business is getting to be a hot spot First there is 'Hell Harbor" then "The White Hell of Pitz Palu," then "Hell's Angels' and now we see where someone else is making "Hell's Valley" Seems as though it is about time they started filming 'Down on the Lehigh Valley," with its tale of Lady Lil, etc —if you follow me!

Good Girl, Laura!

LAURA LA PLANTE signs to do the leading role in "Lonely Wives" for Pathe In that line there should be much joy for picture-goers, for the fair and lovely Laura has been very much absent since she finished "Showboat" with Universal

Laura showed more astuteness than do most movie stars when she parted company with Universal several months before her contract with Universal expired—and in so doing she passed up a lot of real money But, Laura was thinking of Laura's future and when she tired of the type of pictures

Universal was giving her she decided it was time to quit Laura is a darned good comedienne—one of the best the picture game has ever seen, and she was rapidly being ruined by bad pictures She showed a lot of real spunk by holding off for nearly a year now waiting for a real picture to fit her

The word is out at Pathe that such a picture is 'Lonely Wives," and we look for Laura to give us a performance that will knock them all cold Pathe looks for Laura to hop right back where she was a year ago—one of the six leading feminine box office stars Guided by her able husband, William A Seiter, and able manager, Freddie Fralick, Laura has turned down a lot of pictures during the past year We feel sure that in this one Laura, Pathe and Laura's management must be pretty close to a bull's eye And it will seem nice to see Laura on the screen again

Thanks, Mr. Lloyd!

HAROLD LLOYD comes out with the information that he will not remake "Grandma's Boy" or any of his other silent pictures He is to be congratulated Too many of us have to sit through rehashes now, and this writer would like to hand Mr Lloyd a medal of some sort Seems almost like rewriting the Old Testament into jazz version, this business of dishing up the old silents in talkie form

Poor Chevalier!

ANOTHER one or two like Chevalier's last picture and Paramount will have killed another goose that laid the golden egg Too bad that such a splendid actor as Chevalier should have to stagger through such tripe—to his own downfall Surely there is a good story somewhere that they can use!

Merry Christmas!

WITH so much unemployment and so much business depression throughout the country, there will be fewer cheerful firesides this coming Christmas morning It is sad but true No use dodging the situation and trying to laugh it off with a lot of fine phrases about happy days ahead Of course, there are happy days ahead But the present is what we must think of on Christmas morning

Now—just imagine what a merry Christmas it would be if each of us who have plenty would look about us and see to it that we make just one other family happy on Christmas The cost would not be great A few paltry dollars at most, and—look at the joy we would be giving There will be youngsters who will gaze at empty stockings on Christmas morning Let us all try to do our part in filling them It will make the children happy and will surely make our own Christmas more cheerful, make our hearts lighter, and will be better than all the fine words in the dictionary So, let's get together—quietly and see if there is just one family that each of us can make happy for just one day of the year The man whose birthday we celebrate on Christmas gave his life—can't we give a few dollars!

An EXCELLENT
Christmas Present
is the
CINEMATOGRAPHIC ANNUAL
WHY NOT GIVE ONE TO A FRIEND?

Mr. Dubray and Mr. Huse

DEAR READER—

Even in this age of Radio, Talking Pictures, aeroplanes and all other means of precise rapid communication, two thousand miles form, at times, a barrier that cannot be misestimated when public service is involved

For nearly five years I have proudly enjoyed the privilege of acting as Technical Editor of the "American Cinematographer"

For the past two years I have made Chicago my residence

The two thousand miles that separate the windy city from the Center of Motion Picture production, prevents me from discharging my duties towards you, readers of the "American Cinematographer," with the promptitude that has brought our magazine to the front as an authoritative organ of the Cinematographic World It is with heavy heart that I have requested the "American Society of Cinematographers" to relieve me from the duties of Technical Editor, confident that my withdrawal will prove beneficial to the "American Cinematographer" and its readers

It was with great pleasure that I learned that my dear friend, Mr Emery Huse, was chosen to replace me and wish to extend my heartiest congratulations to both Mr Huse and the readers of the "American Cinematographer" To Mr. Huse, because of this public recognition of his ability and affability, and to our readers because a more capable, more devoted man could not have been chosen for this important position

I also wish to express my most sincere thanks for the splendid co-operation that I always received from all the members of the "American Society of Cinematographers," from the 'Society of Motion Picture Engineers," from the "Academy of Motion Picture Arts and Sciences," and all those Associations, Corporations, Technical publications and individuals who have extended to me their support in my modest efforts, as Technical Editor, to uphold the educational mission of the "American Cinematographer" It is with deep gratitude that I recall the many favors extended to me, which I cannot repay except by continuing to take a less official, but nevertheless most sincere part in the future activities of our magazine.

Farewell,

JOSEPH A DUBRAY, A S C.

[Every now and then Ye Editor slips a mental cog puts his foot in the mud or sufters an apparent total eclipse of the mind Some anti-editor bugs insist that the failing is chronic However, be that as it may the above letter from our good friend Mr Dubray has been hidden beneath piles of papers on this writer's desk It really should have appeared long ago when Mr Huse took over the post that was so ably filled for so many years by Mr Dubray Better late than never, is all we can say—and we herewith offer our editorial apologies to both the above-mentioned gentlemen —The Editor]

Only Minor Changes in Sound Recording Likely, Says Dreher

REVOLUTIONARY changes in talking picture sound recording are not in sight, according to Carl Dreher, chief of the sound department at R-K-O Dreher, who has just returned from New York City following conferences with R-C A Photophone engineers, declares that the present system of sound-recording seems likely to continue indefinitely in its general effects

"Contemplated improvements are but minor to the system as a whole, and are designed to improve quality and lower production costs," Dreher said

He declared the greatest improvement in sight was a portable R-C-A photophone which would make it possible to record sounds and dialog in hitherto inaccessible places, where ponderous booths and recording trucks could not be taken

New Color Process

CONSOLIDATED Film Industries has perfected its new color process, known as Magnacolor, and the company is now to handle natural color product, according to reports coming from New York

Tanar Corporation Moves into Larger Quarters

DURING the past year, one of the most successful and certainly one of the fastest-growing concerns in Hollywood has been the Tanar Corporation, Ltd , manufacturers of the famous portable sound recording system designed by Len H Roos, A S C Despite the general slackness of business conditions throughout the industry, so many orders for Tanar Sound Systems have descended upon this firm that they have been forced to seek larger quarters in order to give their production and research departments the required freedom of action

To this end, they have recently announced the removal of their plant to a new location, which gives them more than 6,000 square feet of floor space, and permits more adequate production, demonstration, and research facilities The offices of the firm are now located at 5357 Santa Monica Boulevard and the laboratories have been moved to 1100-1112 North Serrano Street.

The new plant, as will be seen in the illustrations, is complete in every detail The increase in space, according to Tanar officials, will make possible a tremendous increase in production, while the arrangement is such as to increase the efficiency and speed of production to an extent which will undoubtedly make for much quicker delivery of all orders

Mr. Roos' new research laboratory is also greatly enlarged, giving him vastly improved facilities for the extensive research program now under way

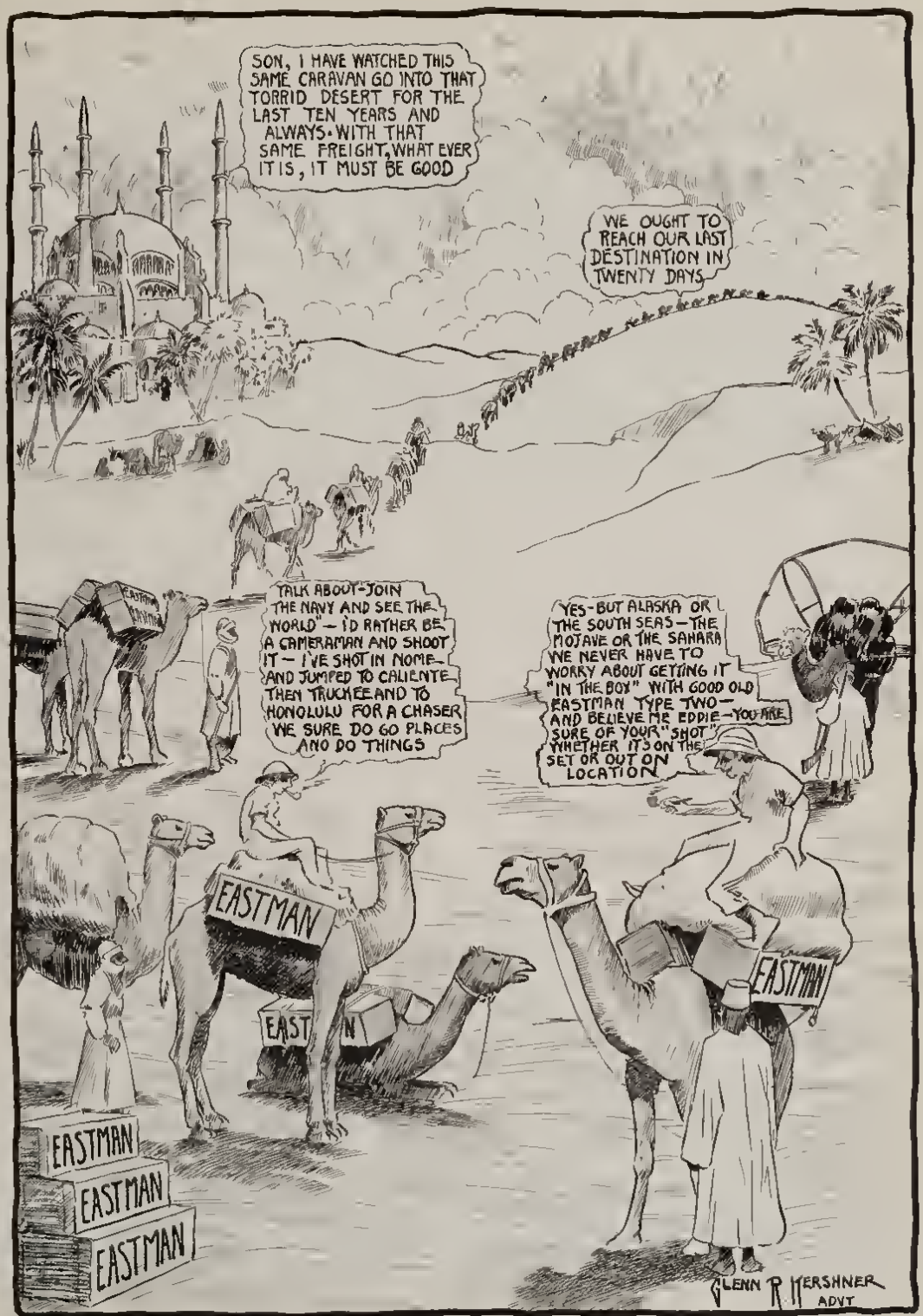
The feature which was, perhaps, the most interesting to the large number of cinematographers and engineers upon the occasion of Mr Roos' recent gala opening, was the luxurious projection room in which Tanar sound-films are now demonstrated Decorated entirely in the Egyptian style, it is without doubt one of the most luxurious projection rooms on the coast, while the quality of the sound reproduction is of the highest order The manner of the presentation of the films upon the opening night was quite in keeping with the luxury of the projection facilities, and won for Mr Roos the new title of "The Sid Grauman of Serrano Street "

This projection-room is completely equipped, not only for the reproduction of sound from either film or disc records, but also, by means of an interlock with the new Tanar double-system recording truck, for scoring and synchronizing work, as well as for dubbing and re-recording on either film or disc

Upper left is general view of Tanar Upper right is view of the experimental laboratory of the Tanar Corporation Center right is a view of the new projection room in this company s new quarters Lower right Mr Len Roos in his office on day of opening

Mr Roos and his associates have very generously announced that the facilities of the projection room, for both projection and synchronizing, are to be extended to the industry The

(Continued on Page 46)


SON, I HAVE WATCHED THIS SAME CARAVAN GO INTO THAT TORRID DESERT FOR THE LAST TEN YEARS AND ALWAYS WITH THAT SAME FREIGHT, WHAT EVER IT IS, IT MUST BE GOOD
WE OUGHT TO REACH OUR LAST DESTINATION IN TWENTY DAYS
TALK ABOUT JOIN THE NAVY AND SEE THE WORLD" — I'D RATHER BE A CAMERAMAN AND SHOOT IT — I'VE SHOT IN NOME AND JUMPED TO CALIENTE THEN TRUCKEE AND TO HONOLULU FOR A CHASER WE SURE DO GO PLACES AND DO THINGS
YES-BUT ALASKA OR THE SOUTH SEAS — THE MOJAVE OR THE SAHARA WE NEVER HAVE TO WORRY ABOUT GETTING IT "IN THE BOX" WITH GOOD OLD EASTMAN TYPE TWO — AND BELIEVE ME EDDIE — YOU ARE SURE OF YOUR "SHOT" WHETHER IT'S ON THE SET OR OUT ON LOCATION
EASTMAN
EASTMAN
EASTMAN
EASTMAN
EASTMAN
GLENN R HERSHNER ADVT

Vitaglo Portable Sound Equipment

Working on the set of "Springtime in the Rockies" with Vitaglo Recording Camera in the Vitaglo Studio No "blimp" used

THE VITAGLO CORPORATION, manufacturers of Vitaglo portable, sound-on-film recording apparatus of 4942 Sheridan Road, Chicago, Ill., has just completed the erection of a new studio and laboratory, and report excellent business, with a very healthy outlook for the coming year.

The Vitaglo recording camera is a light and compact piece of equipment, easily handled and simple of operation A small 12-volt motor, tachometer, fly-wheel, and a special sprocket, including the Vitaglo sound gate, are mounted on the camera The total increase in weight to the camera, according to Vitaglo officials, is but fourteen pounds The company has just brought out a new type, AB202 amplifier, which is contained in a welded steel case with removable cover It has channels for four microphones, a mixing system, visible and audible monitoring, calibrated controls for all tubes and for the recording lamp The amplifier weighs 45 pounds

The total power supply necessary for the camera, motor, amplifier and recording lamp is obtained from one case weighing less than 80 pounds All circuits are checked from the amplifier panel One man is said to be able to handle the entire equipment in action

The new studio has floor space 75 by 50 feet, completely sound proof, with 300,000 watts of incandescent lighting, prepared for feature or commercial productions It was built primarily for demonstration purposes, and is equipped for wax recording or double or single sound on film systems The Vitaglo Corporation also manufactures a line of public address and reproducing amplifiers, and has recently brought out a new photo-electric cell amplifier entirely AC operated, requiring no "B" batteries, and which can be placed ten feet from projector and give sound sufficient to cover an audience of 5,000

Vitaglo Studio staff left to right—R F Devlin A B Chereton Russel Stolts M E Snelling J Stanley and Frank Freimann

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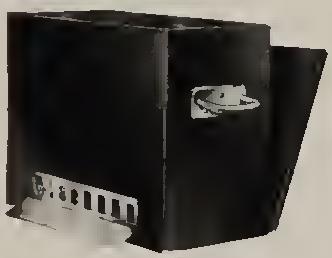
persons, while the weight is very small

The Vitaglo Corporation reports an excellent business abroad and is said to have disposed of a large number of portable sound equipments in Russia and other foreign countries. A. B. Chereton has had many years experience with a camera and is using that experience to good advantage in designing new equipment.

Front View

Model AB202 Amplifier



Rear View

The Cinematographic Annual

will be an excellent

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Sound Engineer with the
TANAR CORPORATION, Ltd.

Wishes all his friends a

MERRY CHRISTMAS and a
HAPPY NEW YEAR

Carrying a Camera to "World's End"

(Continued from Page 13)

From here we will continue to the New Hebrides, where the expedition will center their activities on the cannibal-infested island of Malekula. It will be at Vao, a small island about a mile off the northeastern coast of Malekula, that the expedition will establish its headquarters. It is at Tanemarou Bay, in the Big Numbers territory in Malekula, that the expedition expects to encounter this savage, warlike tribe of people. According to reports received, no white man has ever gotten away from the island during the last five years. A complete motion picture record of this savage and cannibal tribe will be made here, and a collection of the wonderful variety of fish which is to be found in the waters surrounding Vao.

We will then proceed to Lambumba Bay on the narrow Isthmus that connects northern and southern Malekula. Here we expect to encounter a race of people dubbed the "Monkey People" because of their enormous feet with the great toe separated from the other toes, and turned in. They can grasp the branch of a tree with their feet as easily as a civilized man can with his hands. For speed, sureness and grace in climbing they outdo any other race. These people have no houses or huts of any kind. They live in the banyan trees. Unlike their northern neighbors these people do not practice cannibalism. At the southern end of Malekula, just beyond the mountains, is dangerous country which has never been penetrated by white men before. Here the expedition will endeavor to get into this formidable territory, thereby being the first expedition to do so. At this place material of scientific value will be collected.

In the Solomon group the work to be done will be identically the same as that to be executed in the New Hebrides, differing only in this respect, that only birds will be collected, chief among which are the Glossy Starlings.

We will next go to German New Guinea, now mandate to Australia, stopping at the New Mecklenburg group, the Admiralty Islands and the Bismarck Archipelago, if inducements offer.

In New Guinea, where the cannibals' particular specialty is "Long Pig," (human flesh), a certain zest will be lent to the cruise and a rare opportunity presented to view at first hand the lives of these strange people, and undoubtedly rare and precious trophies can be had by trading. It is safe to say that time cannot hang heavy on anyone's hands, while the camera department is photographing the head hunters in their haunts.

This large island continent is known the world over for its gorgeous birds of paradise. Here the expedition will try to obtain a complete collection of these birds. Through the medium of color photography we expect to get some wonderful pictures of these birds.

At the Komodor Islands, the home of the Dragon Lizard (the largest in the world), the expedition plans to obtain a collection of these monsters. This reptile is known to science as **varanus komodoensis.** They are vicious, carnivorous reptiles which attack their food much as the great flesh-eating dinosaurs must have done, ripping off great chunks of meat with their sharp, recurved, saw-edged teeth, and swallowing them whole, bones and all.

The **varanus** lizards first appear as a genus in the early Eocene period, some 60,000,000 years ago, so that we have here not only the largest, but also the oldest, of living lizards. Scientists have been puzzled as to how this reptile got here, for Komoder Island is geologically recent. Thus an old animal is found on a young island.

It will be rare experience to make pictures of this reptile. Our expedition will be the second to make this attempt, for the expedition sponsored by the American Museum of Natural History took a few thousand feet of film of which only 200 feet were good.

Bali Island is situated in the eastern tip of Java, and is inhabited by Malays. This is a luxurious toyland of cocoanut groves, and has an active volcano, an advanced civilization and a people remarkable for their form and beauty.

Bali is a peculiar place. Here books are bound from tree leaves. Religion is the chief occupation. Trial marriage usually takes. It is a land of the slimmest woman and the fattest pigs. Birds talk, and butterflies fly like birds. Praying to pagan gods and fooling pagan devils are the main pastimes.

This little island lies hard by the big path of round-the-world trippers, yet few see it—or even hear of it. It is a social and sociological curiosity, this island of Bali. Its natives are what biologists might call "sports" in East Indian ethnology. Its women are the fairest in all Melaysia.

As to the thousands of temples, statues and ruins, many of them being more than a thousand years old, they will afford the archeologist an opportunity to study the ancient native architecture. These are the envy of our modern architects. On every hand are novel scenes and objects worth while to the busy collector, photographer, sportsman, scientist and student.

Here the photography department will make a complete feature picture in Multicolor, with sound effects, based on Balinese folklore. The actors, in this case also, will be exclusively native.

In Borneo, trips will be made up the Barita and Sampit Rivers, where we expect to obtain very valuable specimens of the fauna and flora of this huge island.

Another purpose of the expedition is to investigate a report made by Mr. Carl Lumholtz in an account of two years of travel in this land of the head hunters, between 1913 and 1917. He states, "I have heard reports of natives in the Schwaner Mountains who are said to have more hair on the body than Europeans, of a brownish color, while that of the head is black."

Controller Michelsen, in the report of his journey to the Upper Sampit and Katingan in 1880, describes a certain Demang Mangan, who had long, thin hair on the head, while on the chest and back it was of the same brown-red as that of the ourang-outang. His arms were long, his mouth large and forward stretching, with long upper lips, and his eye glances were shy. Among the Dyaks he was known as Mangan (red). If there is such a specimen as this in Borneo, the expedition will endeavor to bring one back, as this would give scientists throughout the world an opportunity to study this weird being.

Motion pictures will be made of the Dyaks and wild animal life, besides the collection of monkeys which we decide to bring back alive, chief among these is the Long-nosed Monkey and ourang-outang.

The expedition, in Sumatra, will penetrate to the village of Balige, off Toba Bataks. Here one will see collections of strangely carved wood and bamboo houses, built around a large market-place. The Bataks used to practice cannibalism in the old days, and some of the wrinkled natives will relate scenes of warfare and feasts of human flesh, partly cooked with a dash of lemon, as this is the way they eat it.

The eating of the aged is also practiced. This is thought to have been based on a vague conception of immortality. The aged man's body would thus become part of the strong, brown bodies around him, and the wisdom of the wise and experienced would also be passed to their successors, while the fallen warriors would give to them strength and bravery. Apparently these, both the eaten and the eaters, except, of course, the unfortunate enemy or captive, seem to have favored the arrangement, in most cases.

We shall also visit the very warlike tribes on the northwest coast of Sumatra. These people have refused to recognize Dutch authority for a number of years. Wonderful trophies for the museums will be collected here.

Singapore, the gateway to the Far East, will be our next port of call, for food supplies and film, before proceeding to Saigon, French Indo-China, where we will film a stupendous animal picture. A collection of wild animal groups will be made for the museums after which the expedition will leave for the Philippine Islands.

(Continued on Page 29)

Have you ENTERED

the BOOTHE COMPANY ALUMINUM CONTEST?

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Win a Cash Prize and show the Picture Industry what you have perfected. It may make you independent for life.

FULL PARTICULARS OF THIS CONTEST APPEARED in OCTOBER and NOVEMBER ISSUES OF THIS MAGAZINE

For further particulars write Contest Editor

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NOW!

RULES OF CONTEST

1. The BOOTHE COMPANY, ALUMINUM MODEL—CASH PRIZE CONTEST began with October issue of the AMERICAN CINEMATOGRAPHER and ends at midnight of January 15th, 1931. Winners' names will be announced in the February number of this magazine It is not necessary to be a subscriber to this periodical in order to compete.

2. Cash awards of $100—$60—and $40—representing first, second and third prizes will be given by BOOTHE COMPANY to the three contestants whose models, in the opinion of the judges are considered best adapted to practical and beneficial use in the production of motion pictures. Contestants, in case of a tie, will receive like awards.

3. Anyone associated with motion picture work may compete—amateurs as well as professionals This also means all motion picture studio or motion picture theatre employees, or any organization whose products are used in motion picture work, except those in any way associated with the BOOTHE COMPANY or any other organization handling aluminum or aluminum alloys.

4. The judges, whose names are announced in this issue of the AMERICAN CINEMATOGRAPHER, are representatives of various branches of the motion picture industry. Their decision will be final

5. Two photographs, a front and side view, with a description of the completed product, must be sent to "The BOOTHE COMPANY ALUMINUM CONTEST Editor" 1222 Cearanty Buildmg Hollywood on or before January 15th, 1931. Be sure that this is accompanied by your name and address No communications regarding this contest will be answered, unless accompanied by a self-addressed, stamped envelope In no instance shall entries be sent until such request is made by the judges Products must be made from aluminum or aleminum alloys They may be wholly of aleminum or aleminum alloys, or may represent not less than seventy-five percent of these metals by weight They may represent in their entirety a product useful to the motion picture industry, or may be a part, attachment or accessory to be used on some apparatus machine or structure now employed

Still by Shirley Martin

JOHN BOLES and LUPE VELEZ

in

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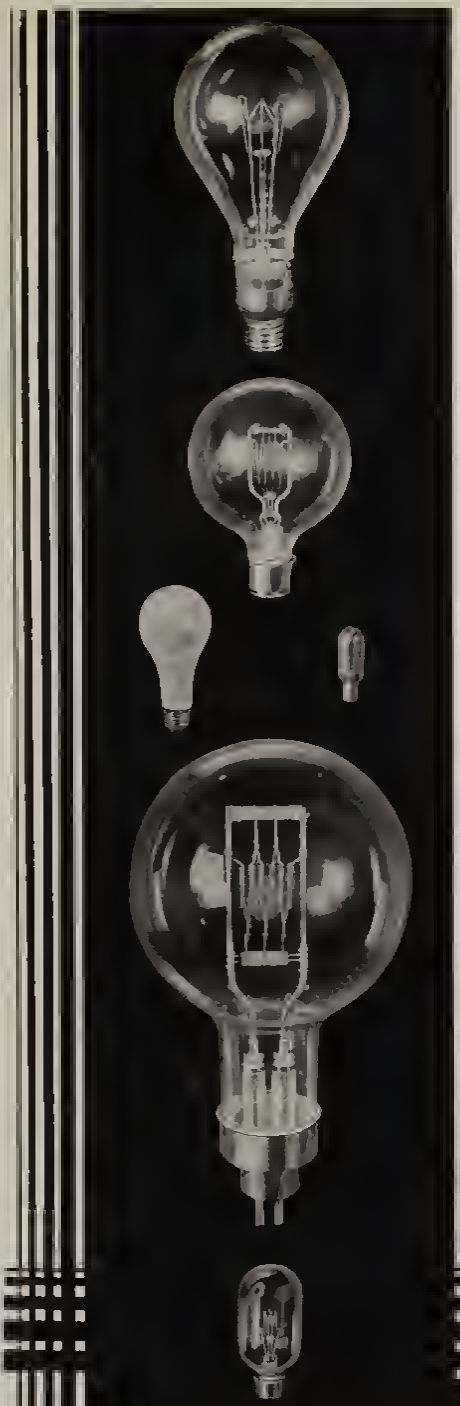

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"Cimarron" Expressed with Lacos

by **JOHN PARKER**

THE ADEQUACY of incandescent lighting for black and white photography is proven definitely in the numerous sequences of "Cimarron," R-K-O's biggest and latest picture now in the course of production

Interiors and exteriors required by the story, necessitates the photography of countless scenes taken in the studio where many sets have been constructed, as well as on several locations

Through their ability to meet lighting requirements not to be found in the ordinary production, more than two hundred Laco Lites were used in the filming of a street scene representing a thoroughfare in Osage, Oklahoma, locale of the story More than one thousand feet in length and perhaps one of the longest street scenes ever constructed for motion picture production, this set was built on the R-K-O ranch near Encino where ample opportunity was offered for the production of many most unusual effects

A majority of the interior shots, especially the tent and banquet scenes photographed with the aid of Laco incandescents, brought out color values to great advantage

In no way discrediting so called "natural color" production, it indeed would be hard to produce a picture that offers the variety of color effects to be found in "Cimarron" The grays and sombre tones of the "gospel tent" episodes express great feeling—contrasted by the rich, bright yellows and greens produced in the banquet scenes where color value of the floral decorations most effectively and delicately is expressed

In the employment of Dietz All Metal reflectors with Laco incandescent lamps, "hot-spots," "smudges" and "ghosts," heretofore a menace to the picture producer, were overcome The progressiveness of the builders of Laco incandescent equipment is manifested in their adoption of the Dietz product which in the "Cimarron" close-ups most effectively breaks up the glare and produces the soft tones so necessary to modern photography Hard, sharp features and "heavy" make-up are successfully smoothed out

All foreground lighting was produced with the use of Lacos, which yield effective high-lights and shadows revealing the construction of "Cimarron" sets authentically designed and first produced in miniature by Max Ree, R-K-O's art director In the filming of the street scenes, with the aid of Laco 36 inch lamps used in the foreground, perspectives most definitely were produced, proving that incandescent equipment can yield, when necessary, a sharp, strong, penetrable ray

A battery of Laco Lights in use during filming of a "Cimarron" interior

That more than 1500 people, 1100 head of livestock and hundreds of covered wagons were employed in the filming of the Edna Ferber story is proof of its enormity In production since early August, locations that include the R-K-O ranch near Encino and a site at Delano which covers more than 100 acres were required, while seventy freight cars and a fleet of trucks have been used for carrying equipment. Because of its light weight and ability to withstand rough usage Laco equipment, according to Chief Electrician William Johnson of R-K-O, materially aided in expense reduction

"Cimarron," undoubtedly, from a technical as well as from an artistic standpoint, will introduce many new features in modern picture production

•

The ideal of professional dreams—the answer to an amateur's prayer—the Cinematographic Annual.

One of the longest street ever constructed for a motion picture set a scene in "Cimarron" lighted with Lacos

Carrying a Camera to "World's End"

(Continued from Page 24)

From here we will call at the Yap Islands, Marianne, Caroline and the Marshall Islands, collecting everything that will be of scientific value, after which we will proceed to Honolulu, and thence to Los Angeles

During this trip, the expedition expects to make about 250,000 feet of film, with sound effects, 50,000 of which will be in Multicolor, in the standard and grandeur sizes

As to the scientific collection, the expedition will return with the most unique collection from the Pacific Islands, the Dutch East Indies, Malaysia and French Indo-China

●

R-C-A "Mobile Talkie" Truck Shows U Film in Theatres

R-C-A Photophone and Universal Pictures are cooperating on a project in England which makes it possible to show Universal's "All Quiet on the Western Front" in unwired theatres

Photophone engineers have devised a sound truck carrying two portable R-C-A sound sets The machine travels from town to town All specials by Universal are to be shown in this manner

The body of the truck is mounted upon the chassis of an English motor truck which has an electric generator coupled to an electric motor on the rear axle The body is specially designed, 27 feet long and of sufficient height to carry 12-sheet posters on either side It houses two R-C-A Photophone Small Theatre types of sound reproducing apparatus The exterior of the van is painted royal blue and the interior yellow

Van Der Veer and Rucker Win Academy Cinematographic Award

WILLARD VAN DER VEER and Joseph Rucker, two newsreel cameramen who accompanied Commander Byrd to the South Pole, were given the Academy of Motion Picture Arts and Sciences award for the most outstanding cinematographic achievement of the year at the Academy's annual award dinner held November fifth

This achievement was the famous picture "With Byrd at the South Pole," which has proven a tremendous hit throughout the entire country The award was given the two cameramen jointly

Dther awards given by the Academy included.

Performance by actress Norma Shearer for The Divorcee"

Performance by actor George Arliss for "Disraeli"

Achievement by director Lewis Milestone for "All Quiet on the Western Front"

Outstanding production "All Quiet on the Western Front," Universal Studios

Cinematographic achievement "With Byrd at the South Pole," Willard Van Der Veer and Joseph T Rucker, jointly

Art direction achievement· "King of Jazz," Herman Rosse.

Sound Recording achievement "The Big House" Award to the Sound Department of Metro-Goldwyn-Mayer Studios

Writing achievement "The Big House," Frances Marion

Will H Hays, President of the Motion Picture Producers and Distributors of America, Inc was a guest speaker Another feature was an address through the medium of a talking picture of Thomas A Edison, who, with George Eastman, has been elected to honorary membership in the Academy Due to the unavoidable absence of William C deMille, president, Conrad Nagel, vice-president of the Academy, presided

●

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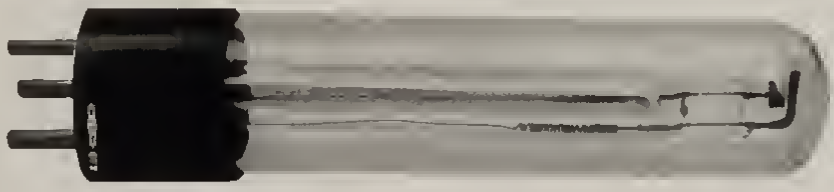

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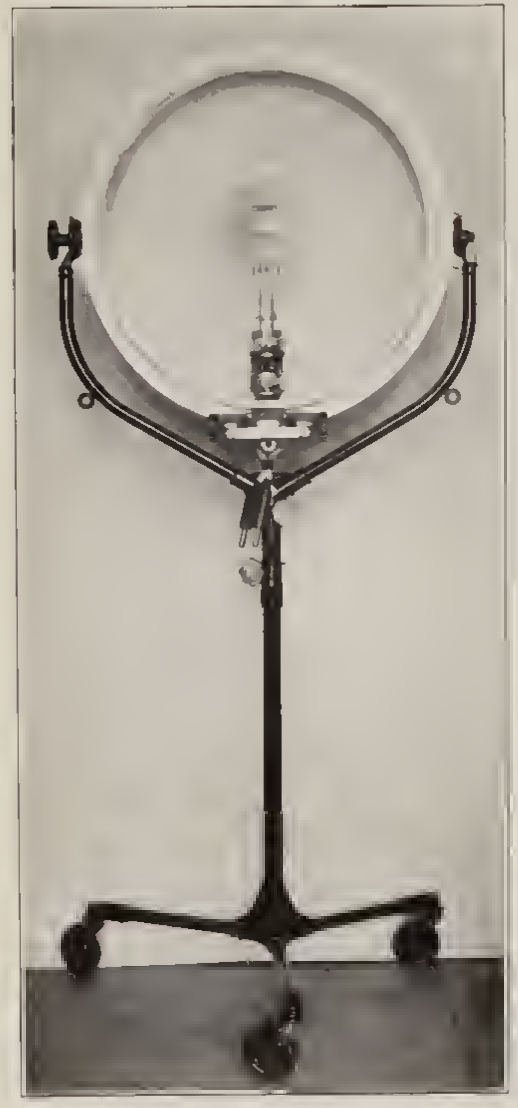
New "Sky Light" from M-R



A RECENT development in incandescent lights was made by Mole-Richardson, Inc., engineers and manufacturers of electrical set, sound and lighting equipment.

The new incandescent is dubbed "sky light," as it was developed particularly to illuminate the immense backings used as sky vistas or background in "Whoopee." Forty of these lamps were made for the Samuel Goldwyn production. The feature of the sky light is that it eliminates light circles and dark rings. Mole-Richardson engineers conceived and developed the new light in record-breaking time, it is stated.

Warner Brothers' New Camera

(Continued from Page 11)

operation, the outstanding feature of the Warner camera is undoubtedly its optical system. It is unique in that the only movement of the lens in focusing is straight to and away from the film; there is no rotary motion. The lenses are mounted on the turret in fixed mounts, and focusing is done by moving the entire turret in relation to the film. This assures microscopic accuracy in focusing, as the lens moves only along its optical axis, and in a straight line, instead of spirally, as is usual. Focusing is effected without displacing either the lens or any other major part of the camera from the normal photographing position, through the use of a reflecting prism which moves into place between the lens and the shutter, and reflects the image onto a ground-glass screen above, and at right angles to the photographing aperture. From this screen the image is again reflected through a magnifying focusing tube to the rear of the camera, where it may be viewed either through a conventional monocular eyepiece, or through an interchangeable binocular one. The latter is claimed by the designers to be by far the best for normal use, as it reduces eye strain to the minimum. In addition to this, there is a highly original provision for following focus during the actual photographing of a scene. This consists of another prism, which by the turn of a lever may be slipped into the same position occupied by the one normally used in focusing. This prism passes 75 per cent of the light through to the film, and reflects 25 per cent of it through the focusing magnifiers, making it possible to follow focus with perfect accuracy and convenience, and with no danger to the film. This, as well as normal focusing, is rendered particularly easy by the fact that the focusing knob is located at the rear of the camera.

In keeping with the rest of the camera, the film-magazines likewise embody many new and interesting features. They are, like the body of the camera, of double-wall construction, to minimize noise, and, instead of being bolted onto the camera, as is generally the case, they are held in place by a quick-acting vise-grip. The take-up is through a V-shaped rubber belt, and the proper tension is automatically maintained by a friction clutch into the shaft of the take-up spindle. The film is wound on a manually-operated expanding core, which is designed so that it is impossible to place the core upon the spindle while in contracted position. As will be seen in the illustrations, there are special castings attached to the magazines to protect the pulleys and driving belt. The light trap consists of three rollers in each retort, and the whole trap assembly is easily removeable for cleaning and replacement.

The present model of the camera is designed for 65 mm film, but a 35 mm model is already in the course of production. In this, according to Mr. Tondreau, there will be a number of detail improvements over the present model, though in most respects the two will be identical excepting the natural differences in size and weight occasioned by the greater dimensions of the present wide-film model. The present model, for instance, weighs approximately 75 pounds, which, although it is far lighter than today's camera-and-blimp combinations, is considerably heavier than the standard-film model will be. Mr. Tondreau also promises certain improvements in various other minor details, but if the enthusiasm of the many cinematographers who were privileged to inspect the present Warner Camera when it was shown to the A. S. C. may be taken as a criterion, he will find such improvement difficult, for it was the unanimous opinion that the present model is the nearest possible approach to cinematic perfection—and even genius can hardly improve that!

•

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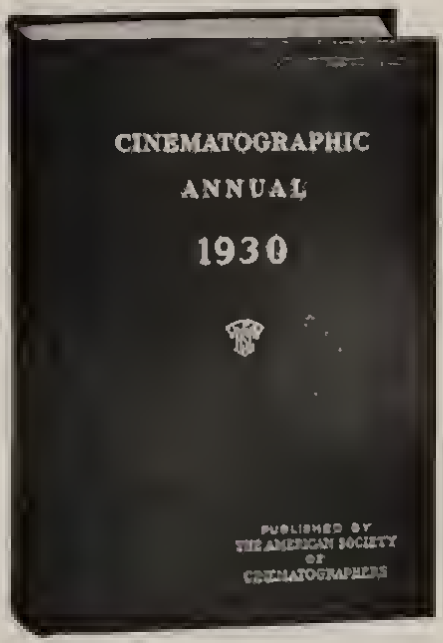

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Sound Picture Equipment in U. S. S. R.

(Continued from Page 9)

existing factories, but the construction of new factories for the timely fulfillment of the plan has been placed on the order of the day.

The above mentioned laboratory is a part of V E O (All Russian electrical trust) and is accredited under the able leadership of Prof. A. F. Shorin with a wide range of application of the apparatus it has developed.

Among the latest of its developments it is worth to note the new electro-stenograph for sound recording purposes. This newly developed apparatus is capable of recording on a film ten sound tracks using the whole width of a normal film. The ends of the film are glued together forming an endless film and the sound is recorded on a spiral. The coil of comparatively small dimensions contains a supply of film sufficient for 4-hours continuous work. Such type of automatic stenograph actually gives a documental recording of speech.

●

Operators' Union Plans 17th Anniversary Party

A DINNER and dance in celebration of the 17th anniversary of Local 306, M. P. Machine Operators' Union, will be held Jan. 17 in the Grand Ballroom of the Hotel Astor. Sam Kaplan, president of the organization, is chairman of the committee.

●

New Catalog

EQUIPMENT covering practically every branch of the theatre is informatively illustrated in a new catalog just published by the National Theatre Supply Co. of New York.

●

Photophone Personnel Changes

THREE changes in R. C. A. Photophone personnel are announced by Charles J. Ross. John H. Tingle has been appointed treasurer, succeeding C. C. Chapelle, transferred to Chicago. C. G. Terwilliger, formerly of R. C. A. Victor, has been made assistant treasurer, succeeding A. Nicol, resigned. W. A. Graham, formerly of Victor, becomes assistant to A. E. Reoch, vice-president.

●

French Trading Company Sticking to Production

THE RENTING department of Messrs. Delac and Vandal, French trade organization, will be discontinued and from now on they will produce only. Gaumont-Franco-Aubert has purchased the pictures they have rented.

●

Fox in Malta

PRACTICALLY the entire Fox product of 1930-31 has been purchased by Manoel Theatre, Valetta, Malta, according to W. R. Watsham, Fox head office representative, recently returned from that country.

●

Blake Made Eastman Sales Manager

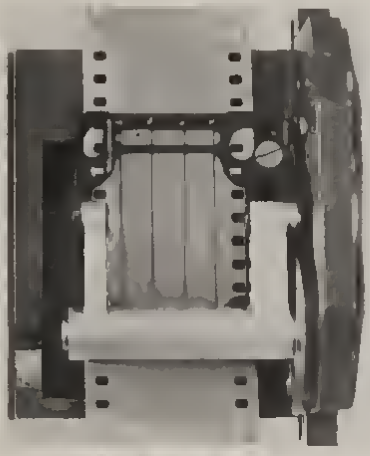
E. E. BLAKE, Cine-Salesmanager of the Eastman Kodak Co., London, has also been made general manager. He will still have the sales department under his direct control.

●

He who DOES a thing best is he who KNOWS HOW
Read the Cinematographic Annual!

Silencing the Bell & Howell

THE HOLLYWOOD Camera Exchange is making a specialty of silencing the shuttle slap noise of the Standard Bell & Howell cameras and is doing considerable business along this line. A distinct slap caused by the pilot pin shuttle has a frequency that is picked up by the microphone at considerable distance



The B & H shuttle with film after silenced by Hollywood Camera Exchange The arm is of Duralumin

The camera also was designed to operate at a speed of 60 feet per minute The new rate of 90 feet per minute will ruin a regular shuttle in a short time This is taken care of in the work of the Hollywood Camera Exchange

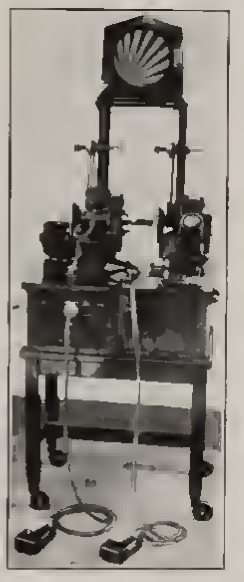
"Our method of rebuilding the shuttle and readjusting the Camera eliminates about 80 percent of the total noise and practically eliminates the shuttle slap entirely With a padded blanket cover, it is possible to use for any sound purpose," says Art Reeves

Close up of shuttle as changed

The illustration shows how the moving parts of the shuttle have been lightened This was necessary to compensate for the new speed The back plate of the shuttle has been practically removed and the film is moved on and off the pilot pins by the four steel wires In this way the slap of the old solid plate is overcome.

The other features are the adjusting of the Cams so as not to get the pounding or the click

MOVIOLA



FILM VIEWING AND SOUND REPRODUCING MACHINES FOR USE WITH SEPARATE PICTURE FILM AND SOUND FILM, COMPOSITE FILM AND SOUND ON DISC RECORD FOR EDITING 35 MM FILM, 16 MM FILM, WIDE FILM.

•

Write for Circulars Describing the Different Models

MOVIOLA COMPANY

1451 GORDON STREET HOLLYWOOD CALIFORNIA

AMERICAN CINEMATOGRAPHER,
1222 Guaranty Bldg.,
Hollywood, California.

Gentlemen Please find enclosed three dollars (Foreign rates additional) for one year's subscription to the American Cinematographer, to begin with the issue of , 19 .

Name

Street No

Town State

Clubbing Rates

	U. S.	Canada	Foreign
American Cinematographer In Club with	$3 00	$3 50	$4 00
Camera Craft	3 90	4 65	5 40
Photo-Era	4 75	5 00	6 40
The Camera	3 90	4 40	5 40

Please make all remittances payable to
THE AMERICAN CINEMATOGRAPHER

Amateur Movie Making

by WILLIAM STULL, A. S. C.

AS ANOTHER holiday season descends upon us, we seem to be surrounded on every side by battalions of "Buy Now!" posters, slogans, and editorials. It isn't such a bad thought, but it must be admitted that being urged to buy your Christmas gifts early to aid the jobless does somewhat tarnish the joy of Christmas giving. Therefore, although there is probably as much unemployment in the photographic business today as there is in any other line, this writer, at least, refuses to say, "Buy some movie supplies for Christmas and aid the destitute cinemechanics!" None the less, I'm of the firm opinion that 1930 is a fine year to begin the practice of giving useful, cinematic gifts wherever possible. Why? Not through any altruistic urge to keep the Eastman, Bell & Howell, or other plants going, but purely because, to those who can use them, cinematic presents will surely be the finest and most appreciated ones possible. For after all, how many other gifts are there which carry with them the assurance that they will be used—and enjoyed—not once, but throughout the whole year? Therefore, I will, after all, raise my voice (and my Remington) to shout "Make 1930 a cinematic Christmas!"

Everyone who reads this page, I am sure, can find on his Christmas list the names of at least two or three individuals to whom cinematic or photographic gifts will be more acceptable than anything else. And, fortunately, the variety of such gifts is so great as to be able to meet every need, and to suit every budget. If both are uniformly great, what could bring more pleasure than a Bell & Howell, Victor, or Cine-Voice Home talkie installation? Yet if both are smaller, there is an almost endless range of lesser gifts, including cameras, projectors, lenses, screens, tripods, filters, and so on, their prices ranging down to the very modest cost of a copy of "The Cinematographic Annual" or a subscription to "The American Cinematographer." In any case, the gift is sure to be appreciated.

Constructive Giving

The main purpose, of course, in such practical giving, is to select the gift which your friend needs and wants. But it also offers a wonderful opportunity to give him something which can aid him in his efforts to master cinematography. If you know just where his weak points lie, and wherein he makes his cinematic mistakes, why not give him something that will tend to correct those mistakes? Such a gift will not only give him pleasure, but will help far more than any advice you, or anyone else, might give him in improving his cinematic game.

For instance, let us say that you have a friend (as you probably have) who cannot, for the life of him, get a steady picture, or who is afflicted with the habit of "Chicago panning" (the machine-gun variety). Further, let us say that you have suggested a tripod as a remedy for this (as you probably have), only to receive the usual reply of "I can't be bothered." Well, then, why not give him one of these new tripods with a quick-detachable head?

Or, say that he has trouble in calculating his exposures—why not a Bell & Howell Photometer, or a Dremophot? Or, if it is focus that troubles him, why not a Leitz or Heydes range-finder?

If, on the other hand, his shortcomings lie in the fields of cutting, titling, or projection, there are similarly all sorts of gentle hints which can be expressed in the form of gifts. Think how many varieties of rewinds, splicers, film-inspectors, and the like there are available. Then consider the innumerable title-making accessories there are. And, if he is one of those careless chaps who never finds time to title his films, why not give him a couple of hundred feet of stock titles, such as "John Brown Presents—" or "The End." He will surely cut these into his films in the enthusiasm of Christmas receiving—and they will show up the absence of the other titles in such a way that he can't ignore the hint.

But the list of possible gifts does not stop at this, by any means. If you are sure your friends have no cinematic faults (and surely they have no other sort!), why not give them some film to add to their libraries? If you have any subject of your own making which is of particular interest to them, a reprint, or a duplicate will solve the problem. If not, there are films of almost every description for sale, in every length from multi-reel feature dramas to little 100-ft. subjects. And, no matter what your friend may be interested in, there is almost certain to be some such reel which will appeal to that interest. If he is interested in travel, the answer is simple, for almost every spot on the globe, from Broadway to Timbuktu can be brought to him via a roll of 16mm film. If his interest is in the field of sport, he will be grateful to you for affording him the chance to study the play of champions on his own screen. If he is an aviation enthusiast, there are miles of film-subjects, historical and instructional, which he will certainly cherish. And so it goes; there is hardly a film library in the land whose catalogue will not be a fruitful field for the selection of such gifts.

Greetings!

But why restrict your cinematic Christmas spirit to the giving of gifts? Even your Christmas-cards can carry the cinematic thought. There are many ways to accomplish this. For instance, you can make enlargements from some frame of your film, and from this negative print a picture upon a number of photographic Christmas greetings. Then, if you are artistically inclined with brush or pen, why not use your cinematic interest for the motif of a painted, drawn, engraved, or linoleum-cut Christmas card? And finally, if the circle of your cinematic acquaintances is a large one, why not make up a little twenty- or thirty-foot reel as a Christmas-greeting, and send the prints to your cinematic friends? It is certainly the most personal greeting you could send them. It is certainly original (which is by no means to be sneezed at in these days of stereotyped sentiment), and it is, most of all, lots of fun in the making—which, in itself, is a good reason for doing it, quite aside from the pleasure that it will give the recipients.

So, once again, "Make this a cinematic Christmas." Not to help the starving manufacturers, not to aid the unhappy unemployed, but simply and selfishly because it is pleasantest for both the giver and the receiver—and, after all, that is what Christmas giving is for, isn't it?

✣ THE SEASON FOR FINE THINGS ✣

The movie maker knows that nothing gives so much pleasure as personal movies And he knows, too, the facts about movie equipment. So that, in this season for fine things, his thoughts turn to Filmo. Logically and instinctively he selects it as the gift supreme, knowing that its true distinction will be fully appreciated.

Filmo is made by Bell & Howell, who for more than 23 years have led the world in the manufacture of professional studio cameras, the first one of which is still in active service And no Filmo, either, has ever worn out . . . proof enough of Bell & Howell quality.

Precision, sturdiness, and dependability are built into the $92 Filmo model as conscientiously as into the $245 model, illustrated here with its Sesamee-locked Mayfair case Ask your dealer to demonstrate Filmo, or write today for literature.

BELL & HOWELL

Filmo

PROFESSIONAL RESULTS WITH AMATEUR EASE

BELL & HOWELL CO , Dept. XX, 1848 Larchmont Ave , Chicago, Ill. · New York · Hollywood · London (B & H Co , Ltd) · *Established 1907*

Bei Aufragen und Bestellungen beziehen Sie sich bitte auf die American Cinematographer

A typical funeral in Bali

that only the high-caste spirits are sure of getting into heaven It is the general practice to save up all the low-caste dead until the demise of some nobleman, in the hope that while the pearly gates are flung wide open to receive this favored son, some lesser spirits may creep in unnoticed Besides, it is a much better show being cremated, so to speak, in the reflected glory of a nobleman s dazling obsequies

'We were fortunate in being able to film a very gala funeral Some nobleman had died, and along with his remains more than 150 lesser cadavers were to be cremated

"The celebration lasted for several days On the first day of mourning, there was a glorified circus-parade with all of the dancing-girls and gamelan orchestras of the district taking part, and everyone from miles around trooping into town to enjoy the spectacle The next day came the actual funeral The corpse of the deceased noble was placed in a coffin which took the amazing form of a very gaudy hobby-bull, brightly painted, with spreading horns, snarling teeth and an upraised tail The lesser coffins were fashioned upon the same pattern, but lacked the size and magnificence of this one There was also the coffin of a high-caste priest which, in deference, I suppose to his ecclesiastical status, was in the form of a frightful, and highly ornate lion

"The principal coffin was borne upon an elaborate float, carried on the backs of a number of men Behind it came the hundred and fifty lesser coffins

' When this toplofty hearse approached the pyre, the pall-bearers divided into two parties, some striving to bear the corpse toward the fire, and the others seeking to restrain it These two parties—the 'Friends of Heaven' and 'Friends of Earth,' were soon augmented by a howling mob of by-standers This battle represented the struggle of the soul to attain heaven, and of the body to retain it, and to prolong its earthly existence When the coffin finally reached its goal—the pyre—the corpse itself was torn from the coffin, and the struggle renewed, until hundreds of naked, shouting, brown men were milling and struggling around the corpse It became a free-for-all, in which all the spectators were privileged to join, and which only ended when the corpse had been dragged up to the top of the high Wadah, and the torch applied Then and only then was the torch applied to the hundred and fifty other coffins, which were grouped upon some fifty Wadahs

"Like many another primitive people, the Balinese believe implicity in witchcraft There is one story, more or less authentic, and at least believed by all the Balinese and by many of the whites, which is so strange as to bear repetition It appears that one night a Balinese man was wending his way homeward Hearing a noise in the dark behind him, he turned and found himself being pursued by a riderless bicycle, which chased him down the road and followed all his twistings and turnings through the trees Finally when it caught up with him, he drew his knife in desperation, and managed to slash open the front tire Upon this, the bicycle collapsed and disappeared, leaving the terrified man to make his way home In the morning he returned to the spot, and saw, lying upon the ground at the exact spot where he had slashed the bicycle, a notorious witch-woman, stabbed to the heart' Since then,

Jack Foster talking over the good points of his Eyemo with Clara Bow and Victor Milner A S C

all prudent Balinese, when they see a bicycle approaching in the dark, hurl their daggers at it—and run

"Can you imagine how cheerfully I tackled a night ride of twenty miles on a bicycle, one night, after a late, and somewhat hilarious evening with a friend?

'After Bali, Java (despite the wonder of Boro-Budor) was a disappointment It reminded me of the words of one traveler, who said 'Java is the most beautiful dumb-bell in the world There is an atrocious harmlessness about the people, an utter negativity, that makes one want to stick pins into them, or start a revolution' It could not be described better.

"The rest of our trip, after the brilliance of Bali, was much the same Sumatra, Singapore, Penang, Colombo, and Aden romantic in print, but terribly prosaic after Bali Suez and Egypt, smothered with a plague of flies and Cook's-Tourists Then an attempt to fly from Alexandria to Paris, which was accomplished by dint of several forced landings, aerial detours into the Balkans (involuntary), and much rail travel Then Paris, visits wtih friends and relatives, Italy, and back to New York and the studios

"To me, the two outstanding features of the trip were Bali and the increasing pleasure I got from my attempts at cinematography There have been a lot of definitions made of amateur photography, but in spite of that, I don't think they've hit it quite correctly Amateur photography (especially with a movie camera) isn't a hobby—it's a disease It comes upon you unawares, and before you know it, you have it, **badly.** And if it once gets a start, you're done for! It steals your time, your friends, and your manners—yet you like it It makes you do things that you'd never think of doing otherwise For instance, I remember in Java attending the coronation of a Rajah As it was an open-air celebration, my Eyemo went with me In the normal course of events, I'd have been content to stand by passively, and watch; but with my Eyemo there (and no telephoto lenses) it was different In spite of myself, I found myself edging in, closer and closer, until finally I was 'way down in front, where I had no earthly right to be, immediately in front of his brown majesty, and filming his every move Several times he looked—no, glared—down at me, as though debating whether or not to have this rash commoner and his defiling camera removed, and transported to the Imperial hoosegow Fortunately for me, he decided to submit to being filmed

'The trip gave me many valuable lessons, photographically, which may be of value to other amateurs planning to travel as we did The first thing is to be sure of an abundant film-supply If you are going to be in the tropics, the manufacturers will pack the film in their special tropical containers for you, and tell you how to manage it But be sure that you have plenty of film We didn't We took what we thought would be enough when we left New York, and arranged for what we thought would be abundant supplies to be sent to us here and there en route But still we didn't have enough We were always finding ourselves reduced to a matter of three or four hundred feet just when we ran into something that could have used a thousand feet or so to good advantage And—a situation like that doesn't exactly make one a pleasant traveling companion Once, in such a case, I had the remarkably bad luck to get a serious jam in the camera on my last roll of film! And Mrs Foster wondered why I could hardly be civil for a week afterward!

'Another important thing when you're traveling is to have one of those exposure-meters that actually measure the light When you are constantly moving from various latitudes and to different elevations, your light-values change tremendously. If you're exceptionally lucky, or experienced, you might get by without such a photometer, but to be on the safe side, get one—and use it

'The last thing is, be sure of your camera-cases, be sure that they are locked, and, also, that your camera and lenses (and incidentally, you'll need an assortment of lenses to get the best sort of picture) are firmly held in place, for you've no idea how the various stewards, coolies, and "boys" will knock your baggage around—and you can't carry the camera yourself all the time

"With these provisions, you've a good chance of bringing back a technically good picture It rests with you to make it worth looking at in other ways Yet, in spite of all the "Don'ts" that your more experienced friends may give you, or that you may make for yourself after watching other professional and amateur travelogues, you will almost invariably make the same mistakes in subject matter, for, no matter what you may think when you see the other fellow's picture in a civilied projection-room, once you're out in the wilds, you'll be interested in filming almost the same things that he was interested in filming Try it and see!"

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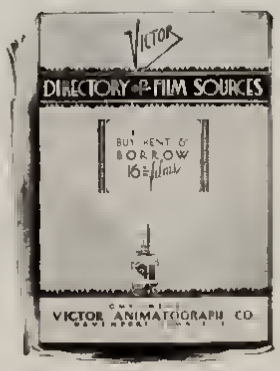
New Victor Directory



THE VICTOR Directory of Film Sources, "Where to Buy, Rent and BORROW 16 mm Films," has been completely revised and the new volume is now ready for distribution

The Victor Animatograph Corporation Davenport, Iowa, well-known as pioneer manufacturers of non-theatrical projection equipment—Victor cine'-cameras and projectors, Stereopticons and Glass Lantern Slides—compiled and printed the first edition of the directory early this year The volume was intended to fill a long-felt need for a complete and accurate listing of 16 mm film sources, and to thus place at the disposal of 16 mm equipment users the great and constanty growing mass of film which existed but was not easily available for the simple reason that few projector owners knew of more than a very limited number of sources

The Victor Directory is distributed free of charge to owners and prospective owners of 16 mm equipment It is published entirely at the expense of the Victor Animatograph Corporation, as no charge is made for the listings and no advertising has been accepted for its columns

That the directory has been and is an outstanding contribution to the world of non-theatrical motion pictures has been evidenced by the great demand for the volume, and the fact that ninety percent of the recipients of the first edition have requested that their names be placed on a permanent list to receive future editions to the directory

For a copy of the new Victor Film Directory, address Film Directory Editor, Victor Animatograph Corporation, Davenport, Iowa, mentioning this magazine

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Film Society Closes

DUBLIN—Hard hit by having to pay a duty on all films it imports for exhibition the Dublin Film Society has decided to close down

About Lenses

Part 2

Focal Length

[First installment appeared in October issue]

SHOULD we place a pinhole, instead of a lens, in the front-board of our camera, we could use the same size of pinhole for making all sizes of pictures, because the image formed by a pinhole is always of the same sharpness, whether the pinhole is far from the film or close to it. If we want a large picture we must, of course, use a large camera with a long bellows, so the pinhole will be a long way from the film, while if we want a small picture we shall only need a small camera with a short bellows, so that the pinhole will be near the film. But if, instead of a pinhole, we use a lens, we shall find that the lens must be placed at a certain distance from the film (depending upon its focal length and its distance from

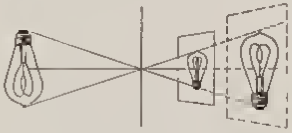

Fig 9

the object photographed) in order to obtain a sharp picture. If it is placed at any other distance from the film, the picture will be all blurred. The reason for this is that a photographic lens bends the rays of light that pass through it so that all the light rays from a star, for instance, will meet again to form an image of the star. By placing a sheet of cardboard at the position where the rays of light meet, the image of the star will be sharp, but if we put the card either nearer to or farther from the lens, the image will be blurred into a circle of light. The distance at which the lens must be placed from the film to give a sharp image of a distant object represents the "focal length" of the lens.

The longer the focal length of a lens the larger the image, and the shorter the focal length the smaller the image. Suppose we photograph a tree and place the camera at such a distance

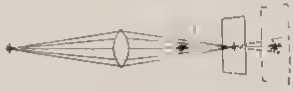

Fig 10

from the tree that with a lens of three inches focal length we obtain a picture in which the image of the tree is one inch long.

Now if, with the camera at the same distance from the tree, we had used a six-inch lens instead of the three-inch lens, which means that instead of the lens being three inches from the film it would be six inches from it, then the image of the tree would be two inches long instead of one inch long in the picture. If we were using the same size film with both lenses, of course we would not be able to include as much

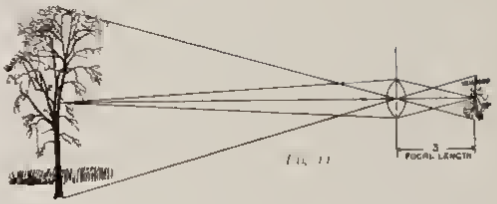

Fig 11

of the subject we were photographing in the field of view of the picture made with the six-inch lens as we would obtain with the three-inch lens, because with the three-inch lens the tree would be, say, a quarter of the length of the film, while with the six-inch lens it would be half the length of the film. In other words, the three-inch lens would give us a smaller image, while the six-inch lens would give us a larger image of the tree.

The longer the focal length of a lens, the less subject we include in our picture, and the larger the images of objects are, while the shorter the focal length, the more subject we include in the picture and the smaller the images are.

In actual practice we must compromise between a lens which will include as large an area as possible in the field of view, and a lens which will give images as large as possible, consequently, for general all-round purposes it is best to use a lens whose focal length is somewhat greater than the longest side of the film. For 2½ x 4¼ film, for instance, we would use a lens of about 5 inches focal length.

It is most important not to use a lens of too short a focal length for the size of the film employed. There is a great temptation to do this. While a lens of 4½-inch focus as compared with a lens of 3-inch focus means a big lens in place of a little lens, and a larger shutter and a somewhat larger camera in place of a smaller shutter and an extremely compact camera, it also means (and this is vastly more important than mere camera compactness) the making of pictures having good perspective instead of pictures with bad perspective. The reason for this is that the perspective of a picture is determined by the point of view from which the lens makes the picture.

If this perspective is not pleasing to the eye it will not be pleasing to the picture.

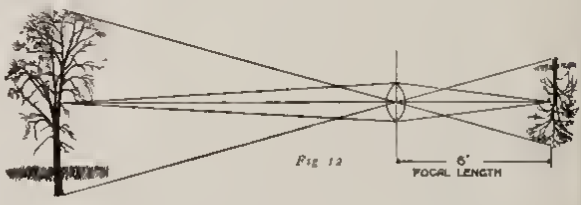

Fig 12

Fig 13 shows a picture made with a very short focus lens used close to the subject. This is a faithful rendering of the perspective that the eye saw from the viewpoint of the lens, but it is far from pleasing.

Fig 13

In Fig 14 the same subject is shown photographed with a long focus lens, and in this picture the perspective is satisfactory It likewise represents the perspective that the eye saw from the viewpoint of the lens

We have shown that it is the working close up with a short focus lens that brings bad perspective, and that with a long focus lens we can obtain good perspective and still get the

Fig 14

large image we desire without working close up For instance, if you want an image two inches high in a 2¼ x 3¼ picture, and you find you must be six feet from the subject to get this image with a three-inch lens, you can get this same size of image in your picture with a 4½-inch lens at nine feet distance; and working nine feet instead of six feet from the subject means obtaining much better perspective

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Chicago Section of S. M. P. E. to Meet Monthly

THE CHICAGO section of the Society of Motion Picture Engineers has completed plans for regular meetings to be held on the first Thursday of each month

For the December 4th meeting it is planned to visit the Enterprise Optical Company and hear a paper by O F Spahr on Projection

On January 8, 1931, a paper will be read before the Society by R Fawn Mitchell of Bell & Howell Company, on Color

Home Talkies, Movies, Phonograph and Radio In One Handsome Instrument

HERE is information to set tongues wagging, eyes popping and which should be of unusual interest to lovers of music and motion pictures, as well as ardent makers of 16 mm pictures The Bell & Howell Company, makers of the famous Filmos, have just announced a new instrument that combines home talkies, home movies, the radio and the phonograph all in one beautiful machine that is an attractive piece of furniture as well Delivery date is set for December 15

A Bell & Howell Filmo movie projector, utilizing regular 16 mm home movie size film, is used for the pictures, and a Howard chassis is the basis of the radio feature—two products famed for quality in their respective fields A phonograph motor is so arranged that the turntable can be operated at either the standard speed for ordinary phonograph records or thirty-three and a third revolutions per minute when the records for the sound pictures are played

The flexibility of the new combination instrument is such that talkies and also movies without sound can be projected Again the pictures may be shown with radio or phonograph musical accompaniments not synchronized with the film Also, of course, the radio or phonograph are available each by itself if desired.

A large number of home talkie subjects can now be secured from photographic dealers Among these are the always amusing "Felix the Cat" cartoons as well as numerous other entertaining and instructional features, including many of the famous UFA educational sound pictures It was the growing size of this list of available sound movies that led logically to the development and announcement of the Filmophone-Radio

Radio and phonograph combinations have already been worked out satisfactorily but the additional problems involved in balancing the other units with the movie projector were not successfully solved until this instrument was evolved by Bell & Howell engineers.

Such a combination will unquestionably present the opportunity of entertaining the most critical home audiences Here is a combination of quality, variety, and novelty, to say nothing of unlimited material from which to draw

●

Improved Screen

DEVELOPMENTS of a new screen, registered under the trade name of "Visibestos," has been announced by Keasbey & Mattison Co of Ambler, Pa Made from an intricate weave of the finest asbestos cloth, it is claimed to have excellent qualities as to acoustical properties, reflection value and freedom from distortion

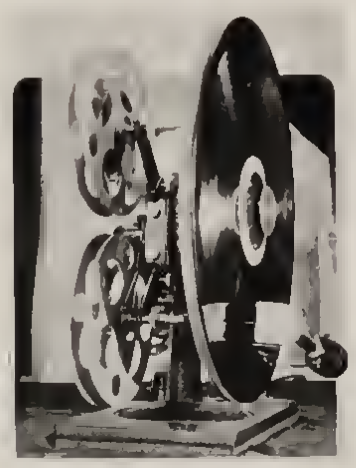
Victor Introduces "Animatophone," New 16 MM. "Talkie" Equipment

A 16 MM. TALKING MOTION PICTURE PROJECTOR has just been announced by Alexander F. Victor, president of the Victor Animatograph Corporation, Davenport, Iowa. Pioneer manufacturers of nontheatrical motion picture equipment. The following descriptive matter from the Victor Company explains the new equipment.

"This new apparatus consists of the newly designed Victor Model 5 Projector and the No. 33 'Animatophone.' It is not, however, of the usual 'hook-up' type which employs an auxiliary, shaft-connected turntable in connection with a regular silent projector, but assembles into a one unit, sound-on-disc synchronizer in which the turn table becomes an intimate part of the projector mechanism, being directly connected thereto.

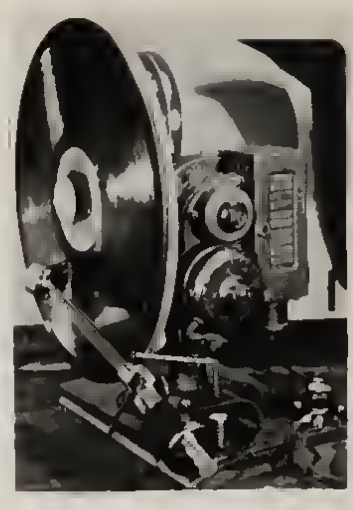
"The Model 5 Projector and the 'Animatophone' were designed and perfected together as a single unit, but the present arrangement offers the advantage of its being possible to purchase the projector alone for silent operation and of later making the addition of the 'Animatophone,' which includes all parts necessary to complete the sound equipment of the Model 5 Projector. The attachment of these parts is so simple that it may be easily accomplished by the owner, who will be spared the expense of returning his projector to the factory for fitting.

"The outstanding feature of the 'Animatophone' is the vertical instead of the usual horizontal disposition of the record, which achieves a new standard in compactness and light weight. The record thus revolves in a plane parallel to the side of the projector, or at right angles to the screen. The direct connection thereby afforded, minus flexible shafts and the like, gives such results as have never been obtained with separate, shaft-connected outfits. Preliminary demonstrations before motion picture and sound experts have shown clarity and constancy of tone.



The 'Animatophone'

Provision has been made in the Projector for constantly maintaining an even speed, for adapting the speed to the requirements of both the 33 1/3 R.P.M. and 78 R.P.M. records, for eliminating vibration, and preventing the transmission of extraneous sounds. Each of these features has been perfected with a deftness and ingenuity that are said to be always characteristic of Alexander F. Victor's inventions.



Another view of the 'Animatophone'

The normal electrical pickup and arm are used, being counterbalanced in a special way so that the needle comes in contact with the record at just the correct pressure for best reproduction. It is an interesting fact that the vertical disposition of the record and the scientific counterbalancing of the tone arm induce a normal pressure which keeps the needle in a central position in the groove, with the result that it greatly increases the life of records. Although a perfect application of pressure sideways instead of up and down is accomplished by the counterbalance, its mechanism is not at all complicated, but, quite to the contrary, is an outstanding example of ingenious simplification. In fact, it is claimed that the system is highly superior for non-theatrical use because it combines simplicity with extreme efficiency.

"The automatic air governor, the disc filter, the speed adaptor, and the pickup tension arrangement are all entirely new ideas conceived by the inventor, Alexander F. Victor, and will unquestionably contribute very largely to the future excellence of non-theatrical sound reproduction.

The automatic air governor is especially worthy of mention because it embodies a most unique idea and performs a highly important task—the maintenance of perfect uniformity of speed. The action of the governor is induced by a forced current of air impinging against a small vane which makes and breaks the contact in such a way that it is impossible for the motor to speed up or slow down, regardless of how much fluctuation there may be in the voltage of the line current. This one little feature has made it possible to use the regular projector motor and to thus eliminate the need for a large, heavy, synchronous type motor. The governor is designed to function perfectly at the two different speeds required for the 33 1/3 R.P.M. and the 78 R.P.M. records. A small indicator is set for the desired speed and, when this is done, no other adjustments for speed need be made.

'The finest quality in projection, as well as in sound reproduction, is insured by the fact that none of the desirable and widely known features of the Victor Projector have been sacrificed in constructing this equipment.

'Provision against damage to films takes on added importance in connection with the use of synchronized film which, in event of damage, requires expert laboratory splicing to prevent loss of synchronization. Due to the Victor film trip, which

automatically cuts off power and light if the film fails to track properly, it is claimed that a film has never been known to break or become mangled during projection in a Victor projector

"It is understood that any Victor Projector, Model 3 or 3B may be returned to the Victor factory and, at a reasonable cost, be converted into a Model 5 for use with the 'Animatophone'

"In the standard Model 5 Victor Projector, maximum illumination and universal current adaption are provided for by a built-in transformer for 50-60 cycle A C operation The current, however, may be diverted from the transformer with the result that the instrument may be operated on either alternating or direct current, with or without Victor lamp rheostat Thus, the equipment permits the use intermittently of all the popular projection lamps—the standard 100-110 volt, 200 watt, the high intensity 30 volt, 165 watt, and the 20 volt, 250 watt lamps

"This new 'Talkie' apparatus consists of only two units—the Animatophone-equipped Projector and an Amplifier-speaker Two models of Amplifier- speakers are offered for use with the Animatophone Both are especially designed units in which only the highest type of well-known amplifiers and speakers are used Amplifiers and speakers are compactly and efficiently assembled in a cleverly designed carrying case—the No 245 being about the size of the Projector carrying case, and the No 250 about half again as large

"It is anticipated by the manufacturers that the master Model 5 Projector and 'Animatophone' will prove extremely popular with commercial, educational, and religious users of motion pictures for the reason that it has no limitations, gives truly professional results, and is so compact and light in weight that it can be set up and operated in about a third of the space ordinarily required for 16 mm Talkies, and may be transported with extreme ease

"The standard model, as has already been indicated, may be used with the 33 1/3 R P M records and also with the 78 R P M records The 33 1/3 records run slightly more than 14 minutes while the 78s, which are the same as phonograph records, run only about five minutes

"Here it is appropos to mention that a good selection of short talkie subjects is already available for rental and purchase, and that a number of studios are specializing on short entertainment, novelty and educational talkies which are intended for home, school and church use (See Victor Directory of Film Sources) The industrial user will, of course, have his films and records made to order

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Filmo Topics

THE FOLLOWING is the list of contents for the December issue of Filmo Topics, the excellent monthly magazine of the Bell & Howell Co This will be mailed free to anyone who writes the B & H Company at 1848 Larchmont Ave, Chicago, Ill

Filmo News Pictorial—News photos and captions

Christmas Fare For Your Filmo—Article telling what to film at Christmas and how to film, title, and edit it

Filmo Helps Develop Champions at Northwestern—Article with photos dealing with use of Filmo by Coach Hanley in training the N U football team

Suggestions to Filmoing Travelers, by W E Kidder—Deals with travel in southern hemisphere

Expedition Filming Experiences by William J Morden of the American Museum of Natural History

Titling Your Films—No 3—Pictorial Title Backgrounds

Facts About Filmo, by J A Dubray—Dealing with Projector Film feeding and take-up mechanisms and their relation to the intermittent mechanism

Questions and Answers

Index for 1930—Volume 6

Progress In the Industry

Abstract From S. M. P. E. Progress Committee Report

Plans for ultimate adoption of wide film have continued throughout the summer as several producers were known to be engaged actively in further experimentation According to reports from production centers, negatives for several pictures have been made on wide film as well as on the usual 35 mm width Agreement has been reached among leading producers on perforation standards and sound tracks but there is still a division of opinion on total width and size of frame One possible solution of the projector problem is to make the negatives on wide film and make reduced prints on 35 mm for showing on the present standard projector fitted with a shorter focal length lens.

A transparent paper support which can be coated with either a positive or negative emulsion was placed on the market and the claim advanced that it was suitable for cinematograph film Another innovation was the introduction of a film containing a layer of aluminum foil 0 005 mm thick

The bulk of the leading studios of Europe had installed sound recording channels by July 1930 one of the finest being located in a studio at Wembly England Services of American engineers were in demand by several Russian firms to assist in establishing an expansion program

A report was published during September giving the final results of a comprehensive survey of the methods used to silence cameras in the Hollywood Studios Eighteen types of equipment were tested One very interesting "blimp" was constructed of a cellulosic composition the sections of which were so tightly fitted as to render the housing both airtight and water-tight

The investigation dealing with methods of silencing arc lights for sound motion picture work mentioned in the previous report of this committee has been continued and its results published Data on tests made in 14 studios and reports from the Los Angeles Bureau of Power and Light are included One improved type of arc lamp contains a special built-in choke coil which takes care of commutator ripple The intermittent feed has been eliminated non-grinding gears installed and a new type of positive carbon used which is said not to squeak during feeding of the arc

Improvement has also been noted in high wattage incandescent lamps Such lamps must necessarily be subjected to rough usage and it has been a problem to make these sufficiently strong for such service A new system of bringing the current into the bulbs of 5 KW and 10 KW lamps has greatly increased their strength reduced their heating tendency and permitted the introduction of any amount of current In the method used the glass does not come in contact with current-carrying parts

Incandescent lamps are stated to be in almost universal use in sound studios in England For overheads and banks it is general practice to use 6 to 12 lamps (1500 watt) in a fan cooled single aluminum reflector The average lighting of a set is 400 foot candles The use of tungsten powder for cleaning bulbs is not generally favored

According to reports from the Motion Picture Division of the U S Bureau of Foreign and Domestic Commerce the demand is increasing in foreign countries for sound pictures in native languages The plan of dubbing foreign lines in pictures made with English speaking actors is being discouraged

Sound film records made in England at the Wembly studios are identified by photographing at intervals on the film a lantern slide carrying the scene and shot numbers Each half minute figures up to 10 in Morse code, are printed on the side of the film opposite the sound track Corresponding figures are recorded on the picture negative in the space reserved for the sound track

By controlling the ratio of direct sound to reverberation Maxfield states that the true illusion of nearness or distance of the speaker can be secured There is a critical range of 50 steps of the total 120 sensation units within which sounds may be reproduced pleasantly in theatres

An improved type of fleshing lamp has been devised by Zetka which is stated to have fifty times the life of older types and to be of much sturdier construction Recordings of nearly 25 000 feet have been made

A beam microphone which may be focussed on one speaker has been perfected by a Hollywood sound director

Balantine has studied the effect of cavity resonance on the frequency response characteristic of the condenser microphone Two effects causing increases over the uniform response of condenser microphones are (1) increase of pressure on the diaphragm and (2) acoustic resonance in the cup-shaped recess of the ring stretched over the diaphragm

Two large equipment manufacturers during the summer of 1930 announced lower prices on sound-on-film equipment and the option of purchasing the general installation without the disk One producer who supplied disk records exclusively began early in the summer to supply sound-on film features as well It is considered by some exhibitors that film records "wear" better than disk records and have noticeably less of a metallic note when played There are 3500 theatres however, equipped only for disk records and it will undoubtedly require at least two years to effect a complete change over

A system of recording being developed in Russia employs an oscillograph with one thread and is stated to be suitable for either variable width or variable density recording Another sound-on-film process utilizes a sound print having the record engraved in the edge of the film A sapphire roller pick-up device is employed in the reproduction A roll of clear celluloid is engraved in preparing the master record and this record is then transferred to the sound print No stages of amplification are said to be necessary in reproduction

(Continued on Page 451

Eminent Japanese Engineers Visit U. S. A.

EMINENT Japanese industrial engineers, on a tour of the United States for the purpose of studying American industrial management, visit the Bell & Howell movie camera plant in Chicago They are specially interested in the use of motion pictures in time and motion study to step up manufacturing efficiency

In the picture, Allan H Mogensen, Assistant Editor of Factory and Industrial Management, is seen holding a Filmo 70-D Camera and pointing out its salient features to the visiting Orientals Dr Yoiti Ueno, Conductor of the Tour, and Chief Director of the Japanese Branch of the Taylor Society and the Institute of Industrial Efficiency, is at Mr Mogensen's left At the extreme right of the picture, is O N Wilton Sales Manager of the Bell & Howell Company's Foreign Division

Audio Cinema Planning Increased Production

AUDIO Cinema Studios, recently announced as having made an arrangement with the Erlanger theatrical offices to make film versions of the latter's plays, are expanding their facilities to allow for greatly increased production

Additional sound channels are being installed, the present stage space is being increased and various auxiliary equipment will be brought into active use According to present plans, Audio Cinema's increased production schedule will get under way in about six weeks

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American Equipment for Foreign Theatres

PETER CLARK, INC, has recently sold complete stage equipment, including magnascopic screen, to the Madan Theatres in the Far East, also complete equipment to the Paramounts in Paris and the Imperial in Toronto and the Capitol in Sudbury, Canada F J Madan, the Far East theatre operator, recently made the trip from India to New York, where he bought apparatus and made a study of American methods in theatre equipment He will next visit Chicago and then go to the Coast

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17 Features To Be Made by Paramount in East

NUMBER of features to be made by Paramount in the East between now and next August has been definitely set as 17, it is announced by Jesse L Lasky The list will include two Maurice Chevalier pictures directed by Ernst Lubitsch

French Firm Filming History of Maya Civilization

WE LEARN from our Paris contemporary, **Le Cineopse,** that a French firm is at present at work in Mexico filming a picture based upon the history of the remarkable Maya civilization which formerly flourished in Central America The film is being directed by Mme Titayana, and being photographed by Jimmy Berliet, the famous French cinematographer who specializes in Tropical cinematography

The recent explorations made by Lindbergh in this inaccessible section of Mexico have aroused considerable public interest in the relics left by this vanished race The vast pyramids and temples which still stand attest the fact that the Mayas had developed a very high degree of civilization long before the beginning of the Christian Era By means of the hieroglyphs with which these monuments are covered, and which have recently been deciphered, it is now possible to reconstruct almost completely the history of this race, and it is this little-known tale which is to serve as the basis for Mme Titayana's present film, **Chahal the Maya.** If its sponsors are successful in their undertaking, they should give the world another cinematic document of great historical value, and of tremendous popular appeal,

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ANEW and complete line of microphones, dynamic units and several late types of theatrical horns are among the latest developments of the Miles Reproducer Co of New York In addition to making complete public address systems, the company offers a special organist system consisting of a special microphone, amplifier, two units and special air columns

Progress In the Industry

(Continued from Page 431

A report was published the latter part of May, 1930 and a second report in September 1930 giving the results of extensive tests made on acoustic materials for set construction Reverberation times were measured with the new materials as against times for an empty room The greatest absorption coefficient was found with Zonolite plaster brushed 1/16 to 1/8 inch thick over burlap or chicken wire

A commrttee made up of representatives from the Board of Fire Underwriters, the New York Bureau of Fire Prevention and the Motion Picture Producers Association have drawn up a code on studio and laboratory practice, the exchange and the theater It gives specifications for handling of film from its development to the delivery of finished print

Further information has been published on the Hunter-Pierce developing machine which was mentioned briefly in the previous report The machine consists of horizontal tanks arranged one above the other with a vacuum system drying compartment on top It processes 12 separate strands of film simultaneously at the rate of 10 feet per minute and has a capacity of about one million feet of film per week The film is fed mto and taken off the machine from the same end During processing the film is twisted constantly and is so exposed that any breaks can be repaired very quickly Lasally has also published a descriptron of two development machines those of A Debrie Paris and of Geyer-Werked A G, Berlin The former apparatus is a twin machine, each part of which works independently The develop ing and fixing end is located in a dark room the washing dyeing and drying end in a light room Film passes in loops through the various baths at the rate of 1600 ft per hour The Geyer machine is of somewhat similar design

A slowly growing appreciation of the value of sensitometric control in motion picture film development has been apparent since the advent of the sound motion picture It is also understood to be a general practice in the larger laboratories to make duplicates of the bulk of negatives as finally edited

A new continuous printer has been designed for sound film records which works at 120 feet per minute Contact is established by a curved gate with a flattened aperture through which the films are pulled at the correct tension The printer may also be equipped with an automatic light change attachment A strip of thin film with perforations on its edges Icorresponding to scene changes m the negativel is fed into a special gate attached to the front of the machine The fibre strip is moved forward at a slower rate than the film and as each hole passes over a contact (of which there are 20) a light change is effected Changes may be made for scenes as short as 6 inches It is not necessary to mark the negative in any way by this system

About one-third of the motion picture theatres of the world had been equipped by September, 1930 for sound reproduction of either the synchronous or non-synchronous types In proportion to the total number of theatres Canada leads the list of countries with 70 per cent sound installation, the United States is second with 55 per cent European theatres are rapidly converting their old equipment over for use with sound pictures

The suggestion made by Edgar that projection rooms in major theatres will be equipped with extra dummy machines for handling film with sound records only, has been realized in the showing of the feature production "Hell's Angels at the Chinese Theatre, Hollywood Volume with less distortion, eliminatron ot troubles from heating of the film, and a lowering of projector vibration are some of the advantages cited by Edgar Three dummy projectors connected in parallel were used in the Chinese Theatre demonstration so that two sound tracks could be played at the same time Six reels of 'Magnascope' film were included in the picture which was projected on a 24 by 37 foot screen and 9 extra loudspeakers were added to the regular installation which consisted of three horns A special amplifier system was mstalled to accommodate the 12 horns which made pos sible an increase in volume equal to five times the normal volume of the regular sound installation

One of the most interesting innovations in projection equipment of foreign origin is the French Nalpas double projector Two complete sound-on-film or disk assemblies are mounted compactly on a single rigid support

A resynchronizing device of British origin consists of a footage counter and a dial graduated into 16 sections each of which corresponds to a frame The device is attached to the 90 foot per minute spindle by a flexible shaft The footage counter is set to correspond with the edge number on the film and the dial hand is moved to zero The exact foot and frame passmg the aperture can be detected at once durmg projection

A power level Indicator has been announced for reading the signal amplitude in voice transmission circuits levels from minus ten to plus thirty-six decibels can be measured A monitor has been developed to meet the needs for accurate indication of volume levels from power amplifiers in sound reproducing equipment

In a new type of sound-on-film reproducer mechanical parts in the optical path have been substituted for a cylindrical lens which illuminates only 0 0005 inch ot the film area thus eliminating the usual slit A new ultra-sensitive vacuum tube has been developed in which the grid current is reduced to a very low value for measurements as low as 10-17 amperes Such a tube will indicate a flow of 63 electrons per second

A new 72 inch dynamic cone speaker and directional baffle has been announced which is claimed to deliver clear mellow tow frequency 50 cycle sounds and high frequency 7000 cycle sounds The letters "s" "f" and "th" can be distinguished clearly Another type described by Bostwick utilizes a moving coil piston diaphragm in conjunction with a 2000 cycle cut-off By using this speaker as an adjunct to the ordinary type, it is claimed that uniform reproduction of sounds from 50 to 11,000 cycles may be obtained

Bull has published data on methods of measuring loud speaker efficiency Good horn type speakers used in theatre installations are said to have an efficiency of 35 per cent ordinary commercial speakers only 1 to 6 per cent

At a meeting of the Societe Francaise de Physique Dundoyer de scribed a new type of light bulb for sound reproducing equipment A rectilear filament is arranged parallel to a flat plate fused in the bulb and a microscope objective used to produce a greatly reduced image of the filament on the film

A projection lamp of novel construction is designed so that the upper part of the bulb is spherical whereas the lower part narrows to a cylinder near the base of which is the filament

Methods of using wide-angle lenses to project a much enlarged picture on the screen have been employed in several of the large theatres for certain scenes of such pictures as "Old Ironsides." "Trail of Ninety-Eight" "The Hollywood Review," and "Hell's Angels" In one process a movable screen was utilized which traveled downstage as the growth of the picture occurred These methods all tend to overaccentuate the graininess of the picture The same defect holds if too large a picture is attempted with wide film, tests havmg shown that width of 50 feet is the maximum permissible before such effects begin to appear

When space is at a premium back stage the public address system with outlets over the proscenium arch, has been utilized quite successfully as a substitute for the usual horns during presentation of shorts, such as song cartoons

A novel portable non-Intermittent projector for educational use has been made available by Gaumont It consists of a folding metal case hinged at the top Film moves continuously around a hollow sprocket containing a stationary prism Light from a source on the front of the projector is directed toward the rear through a condenser system and then through the film, where it strikes the first prism At this point it is reflected on to the second prism and thence through the rotating lens drum, and is directed finally through a suitable lens system onto the screen

Several colleges are planning to institute a cultural course on photo play appreciation during 1930-31 Arrangements have been made to release the negatives of outstanding historical pictures made several years ago, for re-editing for educational purposes

To correlate efforts being made in different countries on the production of educational films Will Hays has advocated that the International Cinematographic Institute (League of Nations) prepare a statistical record of the demand for such films

Motion pictures will be made from hidden viewpomts of all public events in Vienna in which the police take part, the films will be used later for police mstruction Eighty percent ot the workers in a silicate factory in Russia are claimed to have been taught to read by means of sound films

Gotthelner and Jecobsohn have reported on improvements in their technic in x-ray cinematography In this type of work the difficulty m the past has been to get sufficient exposure to make pictures without over dosing the patient and working the x-ray tube over its capacity A new lens of f/1 25 was used constructed of two spherical cemented elements A camera equipped with a shutter admitting more light an improved x-ray tube a fluorescent screen, and a highly sensitive film were employed With this equipment it was possible to take pictures for as long as 25 seconds at a time whereas 2 to 3 seconds was the maximum exposure which could be used with older apparatus

An International Institute of Televrsion was founded in Brussels, Belgium which will deal with results of researches in connectron with the broadcasting of pictures Eighteen companies were reported to have twenty-two stations in operation in the United States for television experimentation No license is granted by the Federal Radio Commrssion however, unless evidence can be shown that the work represents legrtmate research

A three-day test made in September 1930 to transmit televised signals across the Atlantic ocean failed and was abandoned A permanent equipment installation for two-way television was set up m April between the Bell Laboratories and the American Telephone and Telegraph Company's offices which are about two miles apart

Televisron images transmrtted by radio were shown as a part of one regular performance at the Proctor Theatre Schnectady, N Y, on May 22 A loud speaker system was used to transmit the vorces of the actors who performed before a "television camera" at the General Electric plant, about one mile distant A 48 hole scanning disk covered the subject twenty times per second Four photoelectric tubes respond 40 000 times per second to the impulses reflected back from the subject Images were transmitted on a wave length of 140 meters the voices on 92 meters At the theatre the light impulses were reproduced first on a small monitor 'telopitkon" then transferred to a light valve where the light was broken up by a 48 hole scanning disk to reproduce the images which were projected on a screen six feet square set under the proscenium arch Head and shoulders of the subjects were reproduced in a black and white picture showing gradation of tones The system was developed under the direction of Alexanderson

Marked progress has also been made in England in the development of television in the hands of Baird Television Ltd On July 1, 1930 a demonstration of television was made before press representatives on a 3 by 6 foot screen Screen brightness was ensured by using 2100 ordinary metal filament lamps instead of neon tubes and Kerr cells as m earlier experiments Commutater contact switches, turning on one lamp at a time sweep the entire bank of 2100 lamps in one-twelfth of a second The receiving outfit on a portable truck was installed in the London Coliseum and demonstrated as a part of their regular variety program three times daily from July 28th to August 9th, 1930 A talking film made on Friday August 8th was televised as a special feature of the program on the closing date of August 9

In another television system patented by Lieut Wold of the Quartermaster Corps U S Army, mechanical scannmg is said to be rendered unnecessary by the use of a lamp house having a lattrce work of filaments, different junctions of which become luminous successively

According to plans announced during the summer of 1930 positive prints made by the additive Herault Trichrome process have the three successive frames dye tinted Projection is made with a contmsouza-Combes nonintermittent projection which at 24 frames per second is said to suppress flicker This projector does not use mirrors or prisms only spherical lenses The Wolf-Heide process is sard to use a similar projection method

Sound prints by the Technicolor process are now made wi h a silver image sound track having a contrast or 'gamma' of unity which is claimed to represent a material advance m the art of reproduction The

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feature picture. Whoopee was made with a sound track which was developed in this way. It is stated to be impractical to control the gamma of the sound track as closely as this on black and white prints.

A new plant for the Multicolor process being constructed in Hollywood during the summer and fall of 1930, will require 200 men and will have a capacity of 3 million feet of film per week. A school for color cameramen is being conducted.

Irby estimates there are over 200 000 home motion picture sets in use. Interest during 1930 appeared to be centering in the development of sound motion picture devices for use in the home. To date these have all been of the type requiring disk turn tables and range from simple models to very elaborate ones. Putting sound records on 16mm. film beside the picture is a difficult problem because of the narrow space available and the delicate equipment required for recording the sound.

Visionola is a radio-photograph and motion picture instrument in which any combination of the three units is attainable. The image from the projector may be reflected onto a 2 by 3 foot screen mounted at the top and back of the cabinet or it may be focused directly on a larger screen. Two loudspeakers are included, one static and one moving coil the former being mounted behind the smaller screen.

A compact mercury vapor lighting unit has been made available for amateur use, designed as a portable studio unit with a power rating of 450 watts. Dallmeyer has issued a new telephoto lens of f/2.9 aperture which is stated to give a linear magnification of three diameters. It is supplied only in 3 inches focal length. The f/0.99 lens made by this firm has been withdrawn from the market.

About eighty per cent of the amateur scenarists have been eliminated because of their inability to write dialogue for sound motion pictures. According to an estimate made by Menefee a million and a half dollars were expended in the production of industrial films during 1929 which indicated a great gain in the popularity of such films. One-third of the amount was devoted to the production of sound films.

Theatres in the province of Szechwan, China on the border of Thibet exhibit American as well as Chinese pictures. There are 27 theatres with a seating capacity of 115 000. As this is an average of more than 4000 seats per theatre, some of the theatres compare favorably in size with several of New York's big cinema houses. The population of the province is 60 million, however, so that only a few can attend at one time. Only silent pictures are shown to date.

Average daily attendance at 18 of Broadway's leading theatres with a seating capacity of 37,000 has been estimated as 100 000.

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Tanar Corporation

(Continued from Page 20)

high quality of the projection of picture and sound, together with the complete privacy afforded, should make this service of great value to the independent trade.

And, speaking about the various services which this progressive firm offers the trade, there is the new Tanar Recording Service, which operates the recently completed Tanar Recording truck. This latest development of the Tanar System was fully described in a recent issue of The American Cinematographer. It employs the double film system, and is equipped to handle any problem which might possibly arise in independent production, either on location or in the studio, and, utilizing as it does one of the lightest and most mobile trucks made, its operators affirm that it can follow even the fastest moving production unit wherever its schedule may lead. Proof of this is apparently given by the fact that since its completion, this new truck has been kept almost uninterruptedly busy.

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Two New Ufatones Start

TWO NEW Ufatones have gone into production at the Neubabelsberg studios under the direction of Erich Pommer. They are titled "The Man Who Looks For His Murderer" and "The Prince of Homburg," based on the famous drama of Kleist.

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The Jofa and Staaken studios in Germany, will soon be equipped with sound-recording apparatus, states a Berlin message. One Tobis and three Klangfilm sets are to be installed in the Jofa studio, and the installation will be completed before the end of the year. No information is available yet as to the apparatus to be installed in Staaken.

Boothe Aluminum Contest

THE TIME is growing short in which to get in the swim in the Boothe Aluminum Company Contest which offers three prizes—First, $100 00, Second, $60 00, Third, $40 00, for the device made of either 75 per cent aluminum, or aluminum alloy

Just to set those newcomers straight who may have missed the first announcement, the Boothe Company is offering these prizes in order to bring out new ways of using aluminum in the picture industry whereby weight can be eliminated in equipment Also to bring out new ideas that may have been lurking in the brains of mechanically inclined persons who have never tried to put the ideas into practice If you wish further particulars just write the contest editor of this magazine The time is growing short—only six more weeks Better hurry

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Movies Aid Illinois Pastor in Church Work

AS FAR back as 1925 the Rev S O Yunker, pastor of St Vincent de Paul Catholic Church, at Springfield, Ill , began his career as an amateur movie maker He had been a still photography enthusiast, and when the Bell & Howell Company began to manufacture its 16 mm motion picture cameras, he was one of the first purchasers of a Filmo outfit

He began his motion picture work as a personal hobby Soon he was making "shots" of parish groups, and, of course, the next step was to call in his parishioners to see the results He found that if he announced that he was to make movies of any parish event, the attendance on that occasion would be stepped up at least 200 percent He says that people like the experience of being "shot" by a movie camera, and the wise clergyman can turn this feeling to fine advantage

"I have made movies of many important diocesan events," he says, "such as dedications of schools and other ceremonies, and these are shown all over the diocese As a matter of fact I have been making, in effect, an historical movie record of diocesan happenings The Bishop is very much interested in the whole idea "

Rev Yunker has just organized a club called The St Vincent de Paul Dramatists, part of whose activities will center around the making of amateur movie productions The parish is largely composed of persons of Lithuanian extraction and descent, and as its first movie production the club is making a film touching upon Lithuanian history Later several movie plays will be produced Rev Yunker acts as both director and cameraman

From his particularly successful experience he states that the movie camera and projector present a splendid opportunity to offer the members of the parish a fine and enjoyable medium of self-expression He shows his pictures in the parish hall, and everyone is pleased to see himself or herself depicted on the screen

He has presented a number of religious educational and entertainment films secured from film distributors, but he finds it particularly advantageous to show at the same time movies of local parish events which he has made himself

He firmly believes that the 16 mm equipment, because of its comparatively low cost of operation, gives the up-to-date pastor a very practical means of stimulating constructive parish interest

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Society of Motion Picture Engineers Establishes New York Headquarters

THE SOCIETY of Motion Picture Engineers has leased Room 701 in the building at 33 West 42nd Street for its New York Headquarters

Headquarters will be in charge of Silvan Harris, who has just been appointed Editor-Manager by the Board of Governors of the Society

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R-K-O Plans Year and Half On Shooting of "Creation"

ACCORDING to recent announcements, R-K-O plans spending a year and a half shooting "Creation," now under preparation at the studio under the direction of Harry Hoyt

●

Carrier to Market Smaller Air System

CARRIER CORP which recently effected a merger of 15 international firms in the air conditioning and ventilating field, will soon place on the market a new air system designed for smaller type theatres

●

H. F. Du Pont Puts R-C-A Set in Delaware Home

H. F Du Pont, an executive of the E I Du Pont de Nemours Company, has had R-C-A Photophone sound installed in the private theatre in his home at Winterthur Del

The Du Pont company recently placed R-C-A Photophone equipment in the Y M C A at Kearney's Point, N J

●

Control for Screen Size Offered by Peter Clark

A SCREEN control for various picture sizes, automatically adjustable by the operator, to effectively portray the outstanding scenes of the picture, is offered by Peter Clark, Inc , of New York

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●

M-G-M Lets Out Music Staff

BECAUSE filmusicals are out of favor, temporarily at least, and on account of the tremendous overhead for maintaining an inactive department, the entire music staff at M-G-M has been let out with the exception of Martin Broones, who formerly was in charge Broones will be transferred to another department The company has no more musicals on its current schedule

Among those to be released are James Dyrenforth, Arthur Freed, Carroll Gibbons, Clifford Grey, Howard Johnson, Joseph Meyers, Oscar Straus, Herbert Stothart and Harry Woods, composers

Dr William Axt, Oscar Radin and Frederick Stahlberg, conductors, were also released

Musical arrangers who were let out include the following Wayne Allen, Hugo Frey, Ray Heindorf, Arthur Lange, Charles Maxwell and Larry Shay

●

Harry Blauvelt Dies

HARRY D BLAUVELT, veteran cameraman who was a member of the Pathe News Staff until two years ago, died a few days ago in Middletown, N Y., after a long illness

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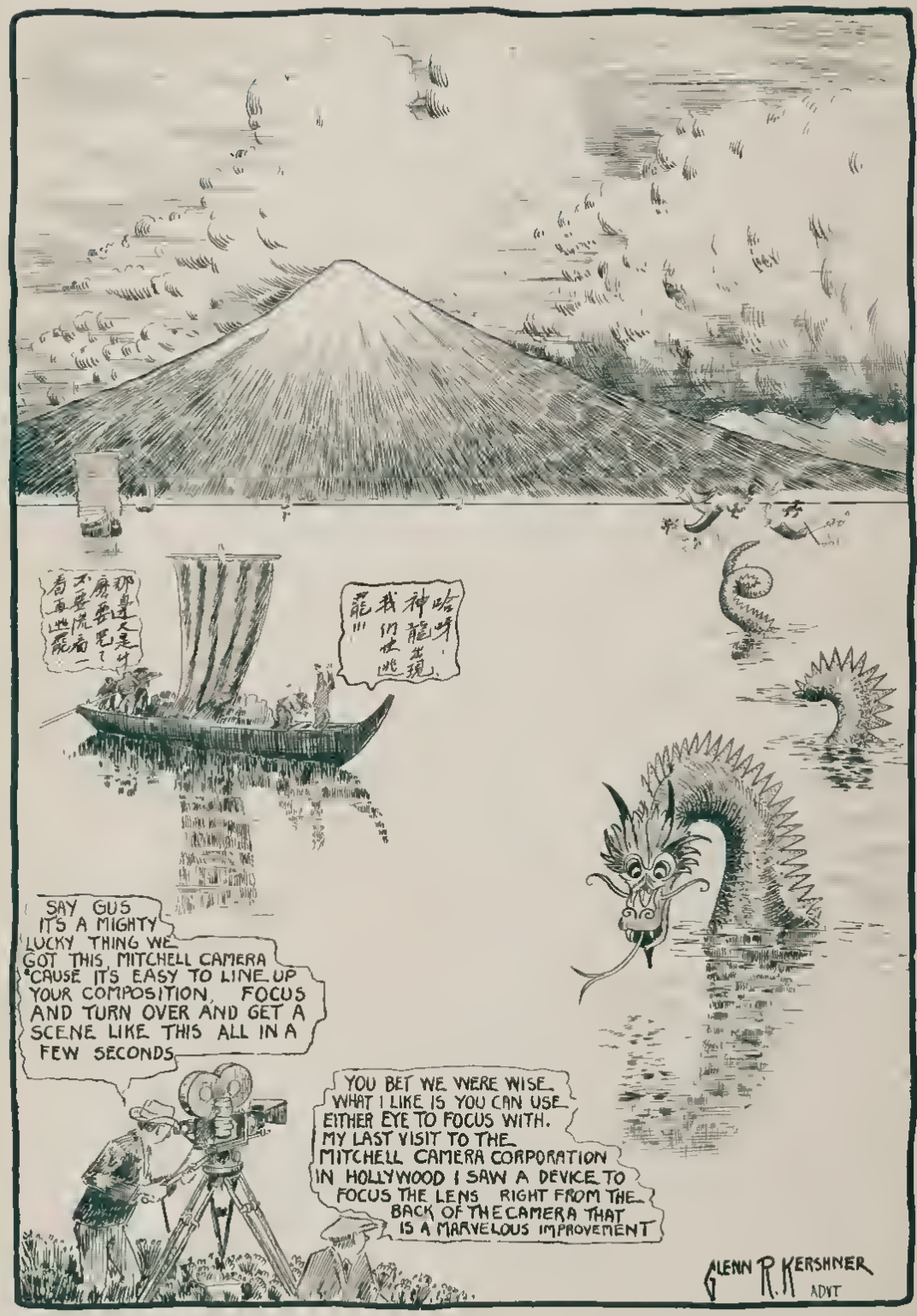
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